An Address
ON
THE INFLUENCE OF MORGAGNI ON ANATOMICAL THOUGHT.

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(Translated for THE LANCET by Madame L. WOLFFSOHN and revised by THE AUTHOR.)

ALTHOUGH the history of medicine has always had a certain connexion with the history of the general culture of mankind it still offers a few remarkable peculiarities. In the first place, without a break in continuity for about twenty-five centuries—from the time of Hippocrates until now—the consciousness of this connexion has never been lost. While religions have changed and systems of law have superseded each other medical traditions have still been preserved. The terminology of to-day, and even the barbarisms of youthful writers, try to preserve the appearance of Hellenistic origin. No other science has ever been in its origin so firmly grounded and none of them is really so old as that of medicine. The history of medicine, such a long continuance of the doctrine, would scarcely have been possible if there had not been an element of unity in the object with which it concerns itself, an element which outlasts all changes of time and place and which presents the same problem of research to each succeeding generation, the problem of disease. Of course, particular diseases differ according to place or time, but the inquiry into the science of disease in general always remains the same; and the task of the physician—the preservation of health—does not cease whether it be in Italy or Russia, in America or Europe. At first sight nothing is so marked or confusing as the change of medical schools according to time and place. Certainly, until towards the Middle Ages all the schools were to be found in one or other of the countries bordering the Mediterranean. The Asclepiades and their successor, Hippocrates, had taken their doctrines from the policlinic of the Temple of Cos and other pre-Asiatic places, whence the new doctrines spread over the whole Grecian world more rapidly after the rise of the empire of Alexander the Great. The first Greek physician appeared in Rome in the time of Cicero. Galen brought the pathological doctrine of Hippocrates with him from Pergamos. But even then no change of doctrine took place. The humoral pathology of Galen did not pretend to be anything but a faithful exposition of Hippocratic teaching; although more than half a century separated the two men posterity had accustomed itself to consider the two as contemporaries, nay, almost as manifestations of a single personality. Rome furnished no rivals during the century. The only classical author of the Latin race was so little original, and, what is still more marked, so little general, that he only acquired renown for his interpretation of portions of this doctrine. It was only in the Eastern portion of the Roman Empire that the school preserved any activity; in Asia Minor, as well as in Byzantium, independent authors existed, who, however, owe their fame to the study of special branches of the system. Nevertheless, humoral pathology remained, and especially in the form which it had received from Galen, the acknowledged doctrine of the whole civilised world east and west. The four cardinal humours, the χυμοι of the Greeks, were everywhere considered the foundation of physiological and pathological modes of study of the component parts of the human body and of the changes they indicate during the course of disease. Every disease, according to that doctrine, appeared to be a change in the mixture of the juices in parts or in the whole of the body. It is therefore an idle question to ask how they arrived at this conception and where the doctrine found its origin. The only other Mediterranean country which has left to us a more comprehensive medical literature, Egypt, offers us no sufficient basis for a possible explanation. As to other more remote lands, we only have some few works from India in which certainly links may be recognised, but they also differ considerably in various parts, and no intimate connexion can be discovered between them. At all events, none of these countries has ever had a decisive influence on the progress of the doctrine of medicine. The first influence of this kind belongs to quite another time and to quite another region. This influence also has been raised on the foundation of humoral pathology. When after the decline of Alexander's kingdom a series of independent kingdoms arose out of the ruins of his conquests, the seeds of medical science were preserved amongst peoples who until then had seemed to be quite without the pale of the interests of science. Smaller and more local centres formed themselves in Syria and in Persia, and there arose continuously a line of noble physicians, who not only gained influence in their native homes, but spread this doctrine far and wide. This was the period when the Jews and Arabs distinguished themselves as amongst the most respected teachers of medicine. Quite lately, in our own time, have Hebrew manuscripts been brought to light, which prove with what zeal and learning the Jewish physicians of the early Middle Ages preserved and furthered the science of medicine. The inherited capacity of the Jews, who since then have done so much for the advancement of science, was very apparent at this period. The Greek heroes might have fallen into oblivion had it not been for the Arabs, who held aloft the lamp of science; first in Mesopotamia and neighbouring lands, then in North Africa and especially in Spain they founded schools which became the nurseries of science for the West. Here were read the Greek authors translated into Arabic and interpreted in the light of progressive experience. The Arabs brought a new and influential element into medical thought, the doctrine of the Spirit, an element almost entirely foreign to the objective mind of the Hellenes except in a similarity which I wish particularly to mention. In Hippocrates the idea is scarcely found at all, but among the shepherds and nomads of the East belief in supernatural powers had been preserved no doubt from prehistoric times. These, different from the natural powers of the material world, were effective partly outside the body in independent existence, and partly within it for a shorter or longer time. The "vital air" was considered as a prototype of this, and found expression in the Hellenic term πνευμα, and in its inferior phenomena was called by the Latin translators "Halitus," and in its higher manifestations "Spiritus." Echoes of this thought have even in our time arrived at a position of some importance in the form of animal magnetism, spiritualism, and also to some extent in hypnotism. Among the Arabs all this lay in the region of speculative thought, such as a lonely brooder might evolve at his fireside. A kind of natural history background was gradually formed for him out of a second mode of observation, the chemical, by which the Arabs acquired such an important position in the history of natural science. It is well known they were the creators of this form of investigation, which only at the end of the last century assumed its true position among the natural sciences. The Arabs themselves never got beyond alchemy, but in taking the first steps in analysis and synthesis, and by the methods of extraction, of distillation, sublimation, precipitation, and the procuring of pure metals and salts, confirmed still more the idea that finer matters were hidden in the raw substances, and these were in their ideas the real forces of nature which underlay the activity of the grosser matter. Thus the idea of spirit came gradually to be linked with the conception of a true reality, a refined embodiment of the effective forces, and in this kind of special vitalisation this idealistic conception was imported into the western world, which even in prehistoric times held ideas that foreshadowed these. The contact of the western with the eastern countries at the time of the Crusades contributed largely to ensure the entrance of such ideas into the minds of eastern peoples. Perhaps that would not have had much influence, but there then existed no western science at that time—at least, no medical science. The West received its scanty store of medical science directly from the learned schools of the Arabs, partly from Spain, and partly from North Africa. For Spain the principal point of contact was Southern France; for North Africa, Southern Italy. But, while the importance of Montpellier developed itself slowly and almost imperceptibly, the school of Salerno has remained the place where the breach was made through which the ideas penetrated which Constantine had imported from the East in the eleventh century. To this was soon added the monastery of Monte Cassino, and the transmission of this doctrine to the Benedictines, as well as later the acceptance of this doctrine in the monasteries. It

is not surprising that the medical science of the monks should be the old humoral pathology. When it was seen that the medical science of the Arabs was found in the Greek authors people began to translate the Arab translations into Latin, and these revised translations very much later have been the foundation of the study of medicine, not only in Italy, but in the whole West. When Latin since the time of Charlemagne had become the speech of science, Hippocrates, and, in a greater degree, Galen, were acknowledged by the Church, and they acquired by and by, although not through the express sanction of the Church, the position of real fathers of the Church, to doubt whose reliability would be considered a sacrilege. So that the doctrines of Galen, already venerable by age, became the absolute dogmas of the Church. It would, perhaps, have happened differently if that kind of institution in which modern medicine has found the real source of her knowledge had then existed—I mean the hospitals (*Kranken-Häuser*); but the so-called hospices of the Middle Ages, especially of the early Middle Ages, were indeed mainly intended for pilgrims and afforded a short rest to the traveller, whilst the priests who superintended them had rarely an opportunity to give assistance to sufferers. It is true that not a few of these old hospices when they had existed a long time became true hospitals. To-day we must recall that the first hospital known to us, built on the Tiber Bridge in Rome in the seventh century, had been founded for Anglo-Saxon pilgrims. This was the Hospital Spiritus in Sassia, in connexion with which later, through Pope Innocence III., the organisation of the Hospitals of the Holy Spirit spread over the whole West. This hospital on the Tiber still stands in the old position transformed into a large non-lay hospital. I have before now described the history of these hospitals, and explained how little they did in the way of affording true help to those in need of assistance and to medical science.

Those among them deserving of mention in the history of medicine owe it almost unexceptionally to the circumstance that they were finally superintended by laymen, and, as a rule, were in the hands of the civil authorities, for only since the beginning of last century have the Governments almost everywhere taken a share in this humanitarian task, especially since medical instruction in the universities categorically demanded the use of hospitals for this purpose.

For my present purpose hospitals have but little concern, for I wish to show this great assembly how the old and dogmatising medicine regained its freedom and became modern scientific medicine. This remarkable change was led up to by a long series of battles that for the most part were fought out on Italian soil, although other nations contributed to this victorious result. The prize of this battle, or, more exactly, the prizes, have fallen to the science of anatomy. It is scarcely necessary to prove that throughout antiquity an opportunity was only once, and that during a short space of time, offered for anatomical researches on the human body. That was the time after the death of Alexander, when the government of Egypt fell into the hands of the Ptolemies. Afterwards a similar possibility was never again given to a physician of the ancient time. And so even Galen could recommend nothing better than to study animals which, in his opinion, were nearest to men—that is, apes and swine. As we can well understand, the sacrificial cult, which demanded the confirmation of the normal condition of animals and their organs, gave many an opportunity for comparative and even pathological observation. Even the usual sacrificial animals must often enough have given a thoughtful observer material for considerations and conclusions which were capable of being utilised for the determination of human pathological conditions; and there can be no doubt that Hippocrates already knew and made use of many facts that have been confirmed centuries later. But it is evident that both anatomy and pathology must remain hypothetical so long as no examination of the human body could yield strict proof of the particular condition of individual parts. The real difficulty lay in the Church. The natural dislike of the people to dissection of the human body was confirmed by ecclesiastical prohibition. To this was added that those who were convinced of Galen's infallibility had no need to dissect. Why undertake dissections if one knew the arrangement of the body? By means of this argument the singular dilemma was reached that hindered the development of anatomy for at least two centuries; in order to prove that Galen had erred dissections must be made. Science demanded this; but the Church declared that it was quite certain that Galen had not made a mistake; therefore it was not advisable to undertake such reprehensible action. Here only the highest ecclesiastical authority could come to the rescue, and it finally decided in favour of science. In Rome itself there have never been wanting physicians who felt it their duty to forward the acknowledgment of truth in science, and not a few of the Papal body physicians have belonged, down to our own times, to the most energetic advanced guard in this struggle. Thus it is explained how, from the beginning of the fourteenth century, Mondini in Bologna got permission to dissect human corpses and demonstrate upon them before students. When once the path was opened up it became available for others. Thus the Italian universities gained a valuable extension of medical instruction at a time when it was still long lacking in most other universities, and thus there were anatomists in Italy when elsewhere such a line of study was not yet known. From that time there began a pilgrimage of students from northern lands to the Italian universities, particularly to Bologna and Padua, and sometimes there even arrived a man who had finished his studies but wished to complete here his full culture. Among these was also the young *savant* whose fate it was, by his own systematic researches, to destroy for ever the belief in Galen's infallibility, and then, at least in the anatomical field, to found in an ineradicable manner, the rights of necropsy. This man was Andrea Vesalius, of a Low German family, born in Belgium, educated in France, but who when professor in Padua arrived at the high position which enabled him to become the true reformer of the doctrine of the institutes of medicine and, at the same time, to conquer for anatomy, for all time, the position of a true (*gründliche*) science. Vesalius was one of those rare men of universal importance so seldom found to appear in history; so that almost all civilised nations of the Europe of that day—Italy, France, Germany, the Netherlands, and even Spain—could look upon and reverence him as belonging to them, and the value of his victories in anatomy was acknowledged at the same time with respect to all other branches of medicine. Nevertheless, it is not quite correct to call him the reformer of medicine. His anatomy, as such, was not able to set aside humoral pathology. Nothing could prevent the idea that the organs of the body, even those whose position, connexion, and arrangements were exactly known, were made up of four *humores*. To procure a change in this, it needed a direct front attack against the centre of the battle-line of the dogmatists against the doctrine of *crasis*. This was accomplished with the violence of a conqueror by a German, who, in truth, despised anatomy and used, instead of it, the Arabian tradition, but in a very changed form, as the means of his effectiveness. This man was Theophrastus Paracelsus, a contemporary of Vesalius. While proving the chemical impossibility of the four *humores*, and their acceptance as elementary matter, he succeeded, with the assistance of spiritistic additions, to build up a kind of anti-doctrine, which, mixed, half naturally, half spiritually, unfortunately acquired in the hands of his successors a predominantly mystical character.

It is difficult to say what might have proceeded from this doctrine, which, although bared of dogma, was on the other hand a prey to the most wilful subjectivity. But salvation was near. Already at the beginning of the seventeenth century William Harvey founded the doctrine of the circulation of the blood and thereby laid the foundation-stone of a new study, which soon arose gloriously beside anatomy—that of physiology. He, too, had come as a young man to Padua, principally in order to improve himself in anatomy. Under the direction of Fabricius ab Acquapendente he studied the arrangement of the bloodvessels and the heart, and so (instead of the blood as *one* of the four *humores cardinales*) he finally looked upon the blood as the "noblest humour," the real *humor cardinalis*. His doctrine of the circulation left only one gap, but that was a sensible one. He could not prove how the blood reached the veins from the arteries. To have given this proof through direct observation is again the merit of an Italian investigator, the celebrated teacher of the University of Bologna, Malpighi, who applied the new invention of the microscope to the observation of the living body and discovered the capillary circulation. In this way, to a certain degree, the crown was set on the building in the erection of which Vesalius and Harvey and innumerable other men of

science employed their powers. Thereby also was confirmed the change of the humoral pathology into a hæmatopathology, and a line of research founded, to the furnishing and transformation of which the following two centuries laboured, and which have not yet found their final close (ending). Strangely enough, none of the investigators above named arrived at the point of applying the results given by pure anatomy and its development into an experimental physiology to pathology; but no one can continuously occupy himself with anatomy without becoming attentive to the changes caused in the living body by disease. Indeed, we know that from Eustachio to Vesalius the pathologico-anatomical differences have occupied attention; but neither they nor their immediate successors have noticed these differences with such accuracy that the foundation of a practical doctrine of disease could proceed therefrom. On the contrary, the old idea that disease was something general became all the stronger the more the conviction that a single liquid streamed through the whole body and was the centre of all essential changes became fixed. Even the comprehensive studies of the great Leyden teacher, Herrmann Boerhaave, could not break down that conviction. It had only the result of removing the importance of local processes into the sphere of the interests of physicians; but it finally culminated in the referring of their local processes to the circulation. Therefore, the circulation always remained in the foreground of pathological observation, and Paracelsus's idea of the *vita propria* of the organs was set aside as a spiritualistic error. It was in this time that the fresh development due to Morgagni occurred. His good star first led him into surroundings which were less favourable to pathological than to anatomical study. Let us dwell on this for a short time. When Giovanni Battista Morgagni in 1698, at the age of scarcely sixteen years, left the school of his native place, Forli, and went to the Bologna University, he found himself, so to say, placed in an anatomical atmosphere.

Everybody still remembered the discoveries which had been made by Malpighi, Aranzi, and Varoli. Morgagni first became closely connected with Valsalva, who made him share directly in his anatomical work and also introduced him to pathology and medical practice. In 1701 he received his diploma in medicine and philosophy, and a few years later the presidentship of the Academia Inquetorum, from which later on proceeded the Istituto delle Scienze. In 1706 there appeared his first independent production, the "Adversaria Anatomica Prima," which was gradually followed by further pamphlets. His fame grew so rapidly that the Venetian Republic called him to a chair in Padua in 1711 which had before been occupied by Vesalius. There was then developed such an extensive scientific activity that the number of students could not be accommodated in the narrow space of his lecture-room. I may venture, I hope, in spite of the international character of this Congress, to remind my hearers how large a share Germany had in this frequency, and how was developed a particular relation of our countrymen to the great master. As early as the year 1715 Malpighi was chosen by his German students as *patronus Germanorum*. With his help they erected a special house with a library, which bore the inscription: "Inclyta natio Germanica adjuvante liberalissimo protectore Cel. viro Io. Bapt. Morgagni M.P.L.P. has sibi emit sedes." But even seven years earlier, in 1708, he had received from Germany the first great foreign distinction which he ever obtained: the Academia Curiosum Naturæ—from which later on the Academia Cæserea Car. Leopold. Cur. Nat. was developed—elected him as member, and in 1732 as adjunct. How much Morgagni felt bound by these honours he has himself repeatedly proved, especially when, at about eighty years of age, he published the first book of his great work, "De Sedibus et Causis Morborum." It is dedicated to Trew, the well-known member of the above-named academy; and he showed the same gratitude (in the last book) to the Berlin Academy of Sciences, which, on the proposal of Johann Friedrich Meckel (to whom the fifth book is dedicated), nominated him member. The method of research, such as practised in Italy by Valsalva and Morgagni, was, in fact, the same used by the best physicians in Germany, in the first place by the members of the Academy of Naturalists, who had already published the first natural history medical review—the "Ephemerides Naturæ Curiosum." When one turns over the leaves of Morgagni's five books how often does one find quotations from that review, and how gratefully does the otherwise keen critic speak of those observers? Certainly, it was not only yesterday that German physicians and naturalists visited Padua and Bologna with a kind of preference, and Italians will not take it amiss that we, when we cross the Brenner on the old imperial road, renew in those towns the memory of old *camaraderie* on the battlefield of science. Vesalius and Morgagni were the geniuses whose images always rise before us, whose fame has outlasted all the warlike deeds of later times, and at whose call we renew the old bonds. These bonds have nothing offensive to other nations. For Morgagni does not belong only to Italy, and still less to Germany; though he was not, like Vesalius, a citizen of several States, he still became in quite as great a measure the representative of science common to all peoples. To recall to memory his relations to Germany seemed to me a duty of gratitude for all that we have received from him; but I gladly acknowledge that a still higher duty of gratitude enjoins us all who are assembled here to offer to his spirit a tribute of acknowledgment for all that he has done for science. But who can briefly express what he has done for science?

When Giovanni Battista Morgagni, at the age of eighty-nine, closed his eyes for ever on Dec. 6th, 1771, he left to the world, as the outcome of the work of such a long life so early dedicated to science, the five books "De Sedibus et Causis Morborum." The new study which was thereby called into life was not then yet named with the name which it afterwards received—pathological anatomy; but everyone already knew that these books contained the sum of all practical knowledge of the material changes of disease which till then had been gained. The recent observations of Valsalva and the yet more numerous ones of Morgagni himself were here united with all the innumerable experiences which were scattered through the academical and periodical publications of all western countries. Morgagni had collected them with anxious fidelity. Unlike the frequently uncritical and unreliable collections and *sepulcreta* of earlier times, every single observation was here controlled by reference to its sources and then exactly criticised, not only in order to fix the anatomical facts, but also to expound the relations of the same to clinical processes, and to form conclusions with regard to diagnosis and prognosis. It was by no means a mere work of collection and reference, like those of his predecessors—Schenk von Grafenberg and Bonet; it was rather a methodological guide; and, on the other hand, the aim of the book was not only the furtherance of anatomy as a pure science, but in almost a greater degree the development of the same into a fundamental science of practical medicine. So it is to be understood that the clinic did not attain its true importance until after Morgagni's time, and therefore we can say that, first with and through Morgagni, the dogmatism of the old schools was completely broken, and that *with him begins modern medicine*. But I have another observation to make. When I said that the work "De Sedibus et Causis Morborum" was also, from the methodological point of view, to be considered a pattern guide, I did not mean it alone of the method of actual observation and the *épicrise* of single cases, but also of the method of the scientific treatment of the doctrine of disease in general. Wherein does this method of Morgagni differ most from that of his predecessors? and in what consists its special merit? It seems to me that neither the historian of medicine nor the representatives of special departments of study have done full justice to the genius of the great Forlisan. Till Morgagni the general or casuistical contemplation of disease or of the patient stood for everyone before the considerations as to the nature of the disease or, as one rather said, as to the essence of the disease. The processes were examined, the symptoms fixed, the changes in the body were attempted to be discussed, all was collected into one picture of disease and a name was given to it. If, as was often the case, the real nature or essence of the disease was not ascertained, it was attempted to clear up the matter in a constructive way and formulate the result. Then anatomical, or clinical, or etiological points of view became decisive, and yet these names of disease (chosen from such different points of view) were treated as co-ordinated denominations. If one did not succeed with the local phenomena one helped oneself out with a hypothesis, whereby the most wild hypotheses were accepted as reliable—nay, even as scientific. What has not happened with fever and with inflammation? Is there an essential fever? Is inflammation an *einheitliche* idea? How different do the answers sound that have been received during the course of time to these questions? Morgagni, who observed diseases as an anatomist, did not consider the question of their

essence as the first object of research. The title of his great work begins with the words, *De sedibus morborum*. Indeed, this is justified by the series of observations which the physician in general and the pathological anatomist in particular has to undertake. I am accustomed to condense all that for my students in the question, *Ubi est morbus?* Where is the disease? And therewith the scientific method of examination and the pre-assumption of the local process are predicated; for it is evident that such a question would be absurd if real general disease existed. To discuss the question of disease before such a learned assembly would seem to be an anachronism. Should any one of those present still preserve in a hidden fold of his brain the memory of general diseases he will, on consideration, find that in every sick man there still exists a part, and as a rule a predominating part, of healthy life, and that the diseased or even dead part forms only one portion of the body. Whoever does not understand this cannot be spoken to at all about pathology in the sense of a natural science. Pathological anatomy has been called upon to demonstrate this conviction *ad oculos:* there is no sick body that is changed in every one of its parts. This is the meaning of the words "*sedes morbi*" which Morgagni puts at the head as the quintessence of his experiences. But pathological anatomy is not in a position to prove the seat of every disease In the great sphere of nerve disease and even in that of poisonings there exist innumerable cases in which anatomical observation is insufficient, not because there is thereby no *sedes morbi*, but because the disease has produced no visible changes in the parts attacked; but anatomy has only to do with visible things. Therefore, the pathologico-anatomical *Befund* (finding) is not covered by the idea of the seat of the disease; on the contrary, we hold ourselves justified on the ground of our physiological and chemical knowledge to speak of the seat of the disease even where we do not discover any visible change.

This it is that I call *the anatomical idea in medicine.* I affirm that no physician can properly think out a process of disease unless he is able to fix for it a place in the body. *Ubi est morbus?* is the question with which not only the examination of a living patient must begin but also that of a dead body; but when this examination does not give a practical result the examination is not therewith at an end, but rather the new task commences, to gather from the whole of the clinical history, and particularly from the etiological facts, where the seat of disease must be accepted as existing. The anatomical thought, according to this, extends far beyond the pathologico-anatomical sphere. It is no longer bound to the visible changes which the knife of the anatomist lays open to observation; it is rather connected with *vital function* and comprehends a large portion of what the modern division of labour points out to the clinician. In Morgagni's time this division of labour was not yet completed, and, though he was more of an anatomist than a clinician, still many a division of his great work belongs principally to the clinical sphere. This explains why so great a number of his successors belonged to the clinical schools, and why he had such a decisive influence on the methods of research. Nothing is more characteristic in this connexion than the fact that the Parisian school of Bayle and Bichat, of Laennec and Dupuytren, is directly recognised as the school of "organicism."

Since then we have far outstripped the aim of that school. The research into the *sedes morbi* has progressed from the organs to the tissues, and from the tissues to the cells. But, at the same time, practical medicine has ever more extended the principle of local treatment, and, to an extent till recently unforeseen, has applied it to the innermost parts of the body, which till now were regarded as absolutely unapproachable. Pharmacology as well as surgery have become every year more localised, so much so that the old Morgagni, if he could stand among us once more, would be probably horrified at conduct that so much contradicts the old tradition—that modern medicine has, in fact, very little resemblance to the science of Galen. And yet we might succeed in gaining absolution from Morgagni by convincing him that it is his *own* idea which celebrates such triumphs—an idea that he himself did not work out to perfect clearness, and the last consequences of which he did not draw, but which first flowed in full strength from his works—the idea of the *sedes morborum*, or, as I have called it, the anatomical idea. It is this idea which now governs all physiologists and pathologists. Whether one traces it with me back to early times or searches for another formulation for it, it will certainly become the idea of the future. And this future will place the date of its origin—its yesterday—in the days of Morgagni. To him be the honour.

Inaugural Address

AT THE FIRST MEETING OF

THE LIFE ASSURANCE MEDICAL OFFICERS' ASSOCIATION.

BY JAMES E. POLLOCK, M.D. ABERD., F.R.C.P. LOND.,

PRESIDENT.

GENTLEMEN,—At this our first meeting, as you have honoured me by requesting me to address you, you will naturally expect me to offer some plea for the existence of an association of medical officers of life assurance companies. You will ask me and yourselves whether this service which we render to such Companies is a legitimate exercise of our professional knowledge; whether it is fair to use our clinical experience to gauge the possible duration of human life in health and disease in order to help others to make money by the information we impart; whether, also, granting that such use is within the proper bounds of our noble profession, we can expect to gain more knowledge, and therefore more precision by association, by the comparison of experiences and by a closer study of the grounds on which we have been accustomed to base our opinions? If we can answer these questions in the affirmative we have a fair plea for the existence of this society. I would, therefore, consider each of them somewhat in detail. But first let me say that the acquirement of all knowledge is facilitated and advanced by coöperation, that facts become substantiated by the corroborative evidence of many observers, and that fallacies are detected in plausible theories by free discussion. This is the plea for all societies which have for their object the investigation of facts, and whose discussion is limited to their elucidation and meaning. That knowledge will by such means increase and become more certain, and that a firmer basis will thus be established for future observers, is well known to all of us. We have, then, to consider the purpose for which our knowledge is demanded, the nature of the information required of us, and the worthiness of the service we give: whether it can rank with the other more accredited objects of our profession—the prevention and cure of disease. Now life assurance is a grand economy; it has been defined as an indemnity, a security against loss, but there is a great deal more in it than this. It enables men to provide for those dependent on them by devoting the gains of the working, active period of life and health to the provision of a store for those who shall survive them. It is a just and accredited mode of saving. Other modes there are, but this, by co-operation and management, offers a more certain way than mere accumulation could do, and by insisting on regularity in putting away money cultivates a habit of economy which is of vast importance to most of us in our daily lives. From this point of view the insurance of life is more than justifiable; it is sanctioned and adopted by wise Governments, and is thus a happy contrast to other countries where gambling is inculcated and the government derives a revenue from lotteries, which lead to squandering of means and the depreciation of every industrious habit.

A second and now rapidly increasing method of life assurances is to secure an available sum at a given age, when the infirmity of advancing life or sickness and the growth of new responsibilities about us may be alleviated by the provision of endowments. A scheme which has been much canvassed lately of compulsory assurance of the labouring class, whereby an enforced provision is made for age and sickness, has received much support in this country, and in my judgment will in some form be eventually carried out. By it the present system, by which the healthy and industrious and temperate are made to support by the rates the idle and sick and intemperate, would be much mitigated if not put an end to. This is, however, scarcely a subject for our consideration, although to be successful it must be based on the principles of life assurance, in which we are all concerned.

A third object of life assurance is to raise funds for the prosecution of legitimate industry. We all know how largely it is employed as a guarantee for the purpose. That it is also largely abused by the profligate and reckless we also know, but for this use or abuse we are not responsible. The forming of our judgment on this class of borrowers requires the unusual and skilled exercise of some of our highest knowledge and most sagacious judgment—of that knowledge of men's secret motives and their temptations which an intercourse with all classes of society and a fine moral discretion often confer on the practising physician. We may assert, therefore, that the guaranteeing of securities which reduce the uncertainties of life to somewhat of an equality has nothing ignoble, but in its influence on society tends not to depress but to elevate its moral tone.

Such are some of the more prominent uses of the assurance of life, but it has had its abuses. There was a time when it was lawful to insure the life of another without having any personal interest in it, and it became a gambling speculation to insure the lives of public persons, often of those known to be the subjects of disease, and known to be so to the insurer. Wives and husbands, whose lives are within reach of foul practices, were often sacrificed for gain by insurance. In our time, as we know, all this is illegal, and there must be a legitimate interest in the life before it can be accepted or a valid contract made.

I consider, then, that we may take it for granted that in affording opinions as to the value of human life to associations interested there is nothing ignoble and nothing derogatory to the dignity and scientific standing of the medical profession. Such knowledge as we have acquired by study and a close observation of human life in health and in disease is properly devoted, in the first instance, to the prevention and cure of disease. It is, however, often demanded and justly afforded to the administration of justice, to the detection of crime and its punishment, to the demonstration of mental ability and disability for the performance of legal functions, and to the assistance possible for science to give to the elucidation of difficult points of jurisprudence. Again, the State has in this country largely entered into the great practical questions connected with the prevention of disease, and has not only legislated to this end but organised a staff of medical advisers who have authority to insist on the sanitary precautions necessary to public health and the exclusion of epidemic and endemic causes of disease. By these means certain diseases, as variola and typhus fever, have been almost stamped out, the mortality of phthisis has been measurably lessened, and the invasion of Asiatic cholera delayed if not frustrated. The causes of disease are being rendered evident to the whole community, and it has placed the means of realising a high standard of health in the hands of every community. Under our improved system the national mortality has been reduced and the average duration of human life perceptibly increased in this country. This may seem to be a little aside of our subject, but it is not really so. Everything affecting the duration of human life should be a study to us especially, and each medical officer of a company may say to himself, "*Nihil humani a me alienum puto.*" But I had also in view a consideration of the various legitimate demands made on our profession outside the mere treatment of the sick, in order to show that we are legitimately employed when we advise on life assurance. All matters connected with public health and jurisprudence, where skilled knowledge is required of us, are fairly within the province of the profession, and to their elucidation some of the ablest workers of our profession have devoted their best attention. To our own particular branch—namely, that which from a study of health and disease is called on for advice as to the probable duration of healthy and diseased lives—much attention has been called in later times. Life assurance has largely increased in this and other countries, and I should say with greatest safety in this. In America it is more speculative, while in France and Italy it is of modern growth. The grand advance of English assurance, according to modern views and experience, is the acceptance of lives impaired by certain diseases at an advanced rate. In France and Italy they have only one class—first-class lives—so that a proposal is either accepted or rejected, and there is no *rating up*.

Now let us for a moment consider the ordinary daily work to which every practising member of the profession is called and the educational training which he has received and how far it has rendered him suitable as an expert on life assurance. I am afraid I am obliged to say, referring to my student life and experience as an examiner in medicine, that while a high standard of education has been required of the practitioner, and the examination test proportionably raised by every licensing body, although we have taught the principles and practice of medicine, and exacted knowledge of physiology and an acquaintance with the pathological products of disease and the diagnostic value of its signs and symptoms, although we insist on an acquaintance with treatment and therapeutics, yet there is one point rarely written about in treatises, and still more rarely examined on, and that is "prognosis" or the probable duration and termination of chronic affections. Again, the correlation of different disorders, as gout and diabetes, and the result on human life of such combination is rarely systematically taught. And when I add to this a consideration of the various causes which shorten life or prolong it you will see what a vast field I have opened to your view of the real nature of life assurance. How it involves heredity, personal habits and surroundings, temperance in food and stimulants, and also the existence or remains of former disease. These are subjects not taught in the schools, or examined in at the colleges or universities, nor indeed can they be taught thoroughly in books or by lectures. They are the result of a thoughtful appreciation of the knowledge obtained at the bedside, by a digest of the recorded histories of disease by men who have not only diagnosed structural disorder, but watched it to its termination, and by an association in the great theatre of the world's life with the habits, social and domestic, of the various classes which play their parts on the social stage. We should know and remember what errors of force or weakness break down the great intellectual brain; what habits, induced or inherent, shorten the life of promise and frustrate the expectations of hope; how some have a resisting power against many disorders, while others crumble down on the approach of illness—we should learn, in short, the kind of constitution best fitted for the rough wear of human life in our times, and should be able to recognise its opposite. I hope I have not opened too wide a field for you and myself, who are "medical advisers." I have only meant to express how large is the area on which we may be called on any day to enter when advising, and to express that mere ordinary medical training is not sufficient for a skilled adviser.

Now, this is the excuse for our association. We are daily called on to offer opinions founded on sufficient, or often insufficient, evidence. We properly fall back on our own knowledge and experience, but we often feel that more than this is needed. We want more results accumulated from the experience of large offices; we want intercommunication with minds similarly occupied with ourselves. We often guess at a probability and endorse it as our opinion when our judgment might be corrected by the experience of others. We are aiming at a certain knowledge which is above or beyond what we can find in our books or has been taught at hospitals; and we believe, and are right in believing, that by contrasting our experience and views with those of others engaged in the same intellectual work we may elicit new ideas and perhaps a higher method.

And here let me say that I think for these reasons of mutual experience that this society should be limited to the accredited advisers of assurance companies. This is not an association for the advancement and discussion of purely medical knowledge; our only *raison d'être* is that we are all engaged in the same occupation, that the work which occupies us is peculiar and somewhat outside the limits of ordinary medical experience, that the conclusions which we may carry into practice are necessarily the results of a knowledge acquired from facts similar to those with which we are dealing in advising companies, and that by association we may hope to arrive at a greater uniformity of opinion as a body. At present we recognise that there is found occasionally a divergence of opinions among us, and we propose to examine in detail as opportunity offers the evidence which may or may not justify such difference. On the whole, we desire to improve our knowledge and make it more available for those whom we have to advise on this important subject. I have dwelt on the importance of life assurance, and, I trust, vindicated its claims to be not unworthy of the exercise of your highest knowledge and ability. The problem daily placed before you is the probable duration of human life, not only in its healthy condition, but when modified by several agents which I shall now glance at, and which will undoubtedly form the basis of many discussions in this association.

It is to be remembered, in the first place, that medicine is as a science uncertain and imperfect. The best of us are still students, and the highest cultivation of our knowledge is clouded with uncertainties. Life does not run a uniform course, but is modified in its powers as in its duration by many causes. Nor are diseases invariable in their form or results. If we had always to deal with typical cases as described in books and taught in our lecture rooms we might be able to predicate the issue with somewhat of certainty; but the hidden forces of life, the inherent vitality of some individuals whose reserve of power can counteract the depressing influences of disease, and the natural or inherited feebleness of others have all to be well weighed in forming a prognosis which shall at least approach to certainty. I believe myself that prognosis—i.e., the power of weighing evidence and applying our general knowledge to the future of individual cases—is perhaps the highest, as it certainly is the last, attainment of the cultivated medical mind. We are taught in the schools to diagnose disease and recognise the structural alterations which result, but how rarely do we find that its future progress and terminations are indicated by our teachers; and, indeed, it is a task of difficulty to the most experienced. This observation applies chiefly to chronic affections, and it is with these that we have to deal in our relations with the public and with insurance companies. What will be the result of that injured lung, or kidney, or heart? Is the machine good to work for five or ten years? We cannot reply always with certainty, but we can often make good prophetic guesses, and our knowledge is daily increasing in this direction. May I exemplify it by my own experience? I was taught the diagnosis of chest disease by the best masters of their time—Stokes and Corrigan—and their teaching, so far as it went, left nothing to desire; but the diversities of form and progress were not taught. When I sat down in the out-patient room of the Brompton Hospital I soon found that I had much to learn. All phthisis was not the same phthisis, but the disease appeared to be modified by various agents, as heredity, the localisation of the disease in the lung, and its limits, age, sex, and hæmoptysis. After much labour I collected the notes of over 13,000 of my own cases, extending over ten years. I thus found that phthisis was not one disease, but a multiform affection and malady, as Latham had said, which "it were vain to think of measuring by the stethoscope." I found that my cases when closely investigated formed themselves into groups, that some were rapid, but that many became prolonged for unexpected periods of years, and I was enabled to form a table of observed durations. Now, as it is of phthisis so it is of other chronic affections. There are many agents which modify and some which cure, or tend to a cure, and it is a high office of the physician to condense his knowledge and experience so as to estimate these in individual instances. How long can a case of albuminuria last, or a case of mitral regurgitation? It is only yesterday that such were rejected by all assurance offices.

May I detain you for a few moments to notice some of the agents which modify the occurrence and influence the progress and duration of chronic disease? Now, foremost among these stands heredity, and it is one which enters daily into our work as advisers. It is also one which has been much studied, and a vast amount of evidence has been already collected about it, some of which has given rise to discussion; and opinions still vary as to its precise operation on individuals. It will therefore, I hope and foretell, prove a fruitful theme for investigation by this association.

We can affirm of it now that form and structure of physical organs, on which depend their integrity or weakness, and that mental and moral conformation of character are transmissible from ancestors more or less remote. It is true, therefore, that the strength or feebleness of those who preceded us in the family tree are reflected through many generations. It is thus that the proclivity to certain errors in individuals may be traced upwards to a remote origin. This is well known to the students of history, and is emphasised by the Stuart, Napoleonic, and Bourbon families. But still more—and what concerns us more—diseases and liabilities to diseases are known to be heritable, and in fact play a most important part in the story of phthisis, rheumatism, gout, cancer and other affections. Whether the disease itself or the constitution or bodily state which offers a field for the growth of germs (as some assert at the present day) is transmitted, the fact itself is incontestable that in some families phthisis will show itself as each individual reaches a certain age; that some have a proclivity to fever and zymotic affections which others entirely escape; that the gouty father will transmit gouty ailments to even the most temperate of sons or daughters, and so on of many affections. The simple facts of longevity or of shortness of life distinguish races and families. We have daily evidence of the transmission of intemperate habits in whole generations, and in others there is found a vital resisting power which, when acute or chronic ailments occur, is a vast help to recovery. I cannot indicate how far back in the family tree heritable peculiarities may have existed, but their existence is certain.

Again, the modifying influences of age and sex are very justly our study and underlie most of our decisions. The tendency of some diseases, as phthisis, to develop at a certain age and the lessened liability of the individual to that affection as he advances in life, or, again, his greater liability to gout as he passes a certain age are instances of cases in which the direct application of our medical knowledge becomes of great importance to the company we advise. In estimating such cases as these we become valuers of the chances of life, and it is certain that you will ask yourselves, Is it possible to do this with any degree of accuracy? Now although a shade of uncertainty hangs about every question affecting the duration of life, I believe that a degree of accuracy may be obtained sufficient for practical purposes. It might almost be stated that a money value might be assigned and a rate found for every condition of life in health and disease; but for this we need a much larger experience than we at present possess and a large number of cases in exactly similar conditions to enable us to form averages. However, these are some of the questions which will come before you from time to time, and in which the individual experience of everyone of you will help to important conclusions. It is to be hoped, also, that some of our members may find time to collect the entire experience of the office with which they are connected as advisers and in this direction I have little doubt that our actuarial friends will give us, as they have done in other similar cases, their powerful help and coöperation. Their mathematical minds will often be a corrective of our matter-of-fact evidence, and give increased precision to our conclusions. The importance of each accumulation of facts is well seen in the published statistics of the Standard and other great offices.

And now let me touch on a delicate but most proper question. Can the assurance offices do as well without us? There was a time, not very far distant, when no medical information was sought on family history and but little on the personal health of a proposer, when the secretary, and with him the board, decided on cases by a "rule of thumb." At that time, although stethoscopic knowledge was taught here, many offices made no chest examination; no analysis of urine was made except in special cases; and habits were not minutely investigated. It is obvious at a glance that they accepted many cases with hereditary taint or with existing disease, as phthisis or heart or kidney affections. By our watchfulness these are now excluded or made to pay a compensating addition to the premium. It is true, as I have heard, that some office has advertised "no medical examination" as an inducement to insurers; but if they have let them off the examination they have "charged it in the bill." And this just leads me to say that insurers have come to regard us with much less apprehension than formerly, and to express the opinion that the cultivated men I see around me, whose life is passed very much in contact with the sick and feeble, would never needlessly alarm the most sensitive applicant. Here also I would add that ours is a profession in which the mercenary motive is rarely found to overbalance the conscientious performance of duties such as ours. I have received with pleasure many times private information from family attendants without which cases could not go through, although the opinion, if known, might prejudice the status of the practitioner, and I have had occasion to observe again and again the loyalty which we all feel to our employers. I think, then, that I am justified in saying that the assurance offices are well served and could not do without us.

Before concluding, let me again impress on you what a most promising field for investigation is to be found in the utilisation of the large amount of facts already accumulated by the older offices. In some instances their experience, which must be enormous and very practical, has been brought to light by the industry of actuaries and of the medical advisers of companies; but a great deal yet remains to be done from the medical point of view, and I have no doubt our actuarial friends would afford facilities for such

investigations. I would therefore commend this line of study to such of our members as have the time and energy to undertake it. There is no doubt that it demands time and patience, but it will amply repay the investigator and add to the stock of knowledge on which depends the value of the opinions we offer. Above all, we want to know how our estimate, or that of our predecessors, as to the value of certain diseased lives taken with an addition has turned out. My own experience is that second-class lives often pay well, while first-class selections often bring unexpected loss; but can this idea be verified by the experience of large numbers? and are we always right as to our conclusions on the value of lives? Again, from this point of view we could surely add much to our knowledge of the value of lives which have been accepted with an addition if we could compare the experience of different offices with each other, and ascertain the exact rating which they are in the habit of assigning to second-class lives.

Now this society offers the best field for such comparison of opinions, and I trust to hear many debates on the question of additions to the tabular premium. My colleague at the Imperial—Mr. Chisholm—has already collected some valuable material on this subject from the experience of some fifteen offices, but this is only a small contribution to a great subject, which we hope to see more fully developed. It is, perhaps, not too much to say that every life has its price if it could be ascertained, just as most of the contingencies of life and property can be insured against if we had sufficient numbers to form averages on which to base our calculations. There are many more subjects which will engage your attention on future nights, such as the influence of age and sex, of occupations and professions, of climate and residence on longevity. Of the constitutions which imply immunity from many diseases and a power of resistance when they occur, as well as of the fragility and easily overcome vitality of others, there is yet much to be learned. Again, it will surely soon become evident that the steadily advancing longevity of our population—by which already two years have been added to human life in these countries,—that the diminished death-rate from all causes, that the diminution of phthisis from improved subsoil drainage and improved sanitary habits, that these and kindred facts affecting the health of the population as a whole will lead to a modification of our tables of mortality and a diminished whole life rate for healthy lives. This also, although a matter for the future, may well occupy your attention.

I have thus endeavoured to indicate a few of the subjects which may profitably occupy you; but apart from these there is a wide field of experience on which we hope to draw, and which each of you has industriously gathered for himself. This may not be easily defined, but it is appreciably valuable, and lends the valuable stamp of individuality to every opinion offered. It is not, indeed, always easy to put in words our reasons for the estimate we form of certain lives; but this has its value in being the outcome of our experience and tact, and of some subtle sense of judgment which we have not often found to mislead.

It remains, then, for me to say that our coöperation for the purposes of obtaining a higher knowledge from the experience of fellow workers and a greater precision in our judgment on individual cases is entirely consistent with the highest scientific objects of our profession, and that such an association as this which we have formed, in which investigation of recorded facts on the duration of human life will meet with a fair discussion, cannot fail to have important results. The field is not narrow, but has indeed an extensive area. It involves questions which require research into the very sources of vitality and the whole economy of life. It demands also from us a thoughtful investigation, not only of the causes of disease, but of the agents which retard its progress. I have not touched on the influences of climate, but this has become a large question in this country with its great empire and its daily extending colonial possessions. Our leading offices have a constantly increasing demand for life insurance from our fellow subjects in these distant countries, and it behoves us to inform ourselves on the effects of various climates on the European race. One of my actuarial colleagues has lately made an extended tour in South Africa, and has observed that chronic chest affections are rare, and, when existing, run a much longer course among the dwellers in the upper *veldt* districts some 3000 or 4000 feet above the sea level. Again, in reports from India—that great malarial country—we are constantly reminded of a variety of effects from residence which are rarely met with here. These afford to us important matter for study as indicating the influences of soil and temperature and the various peculiarities of climates different from our own. But above all influences and overshadowing every proposal for life assurance is the great question of temperance. The insidious effects of alcoholism in promoting cirrhotic and degenerative changes in vital organs are well known to us all, and the early detection of such habits and of the organic alterations which they effect should be carefully considered in every application which comes before us. I fear I have already disregarded the advise of Plato to "refrain from speaking at length among those who know," and I must ask your forgiveness for placing before you so many subjects with which you are familiar by daily practice. By so doing I have, I hope, justified the formation of this association, and possibly opened the way for future discussions.

ON SO-CALLED "COLOUR HEARING."

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(Concluded from p. 796.)

IN the previous part of this paper the characters of the unusual colour sensations induced in some persons by auditory and other stimuli have been considered in some detail as they affect individuals; it now remains to examine the general characters which the various phenomena, as experienced by different subjects, have in common, and to form some idea of their probable nature and relation to other sensations.

Those who experience these phenomena are accustomed to them and not distracted by them, and they usually imagine that everyone else has the same sensations, until they happen to read some account of them or until they hear some inquiries on the subject. A highly educated lady, in whom these colour sensations were extremely vivid, reached the age of fifty-five before being made aware that it was an unusual faculty by hearing a paper read on the subject at a scientific congress. I find that the favoured ones usually express incredulity when I tell them that I myself have no colour associations. When interrogated the subjects almost always state that the sensations date back to early childhood and that they cannot remember a time when they did not experience them. In very rare cases, however, they make their appearance later. One of Flournoy's cases, for example, who had photisms with the vowels *a* and *i* projected into the field of vision—and so definite that they could not well have escaped attention—experienced one for the first time at the age of eleven and the other not until seventeen. There is in most cases a tendency for these colour sensations to become less and less distinct and in the majority of cases to fade before middle life, particularly if no attention is paid to them. Thus a student writes: "I fancy I did not notice the colours much after going to school. Before that I used frequently to amuse myself in bed trying what colour the names of my friends were." By the age of nineteen she had lost all trace of these sensations, which were formerly excited both by letters and spoken vowel-sounds. All writers on the subject have noticed that the faculty is hereditary in many cases, although the sensations excited may be quite different in parent and child, as has been seen. Even in cases where the parents have no secondary colour sensations there may be something approaching it. A young lady aged twenty-three was found to "colour" her alphabet very vividly, greatly to the amusement of her parents. On questioning the parents, it was found that in thinking of a word they also distinctly visualised the letters. With them, however, the letters appeared only in black and white and intermediate shades of grey. There was no agreement between them as to the shades of the individual letters.

Another girl has colour associations both with spoken vowel sounds and with alphabetical signs. Her mother and younger sister visualise the letters, but always see them

TABLE SHOWING THE COLOURS EXCITED BY THE PHONETIC VOWEL SOUNDS IN TWENTY-ONE CASES.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
A H	Black	Black	Dark red	Red	Yellowish blue	Red	Red	Black	Pale red	Red	Pale blue	Pale blue	Pale blue	Cream	Black	Red	Rose	Blue	Light blue	Golden	White
E H	Grey	Yellow	Yellow	White	White	White	Pale yellow	Grey	Pale blue	Rose	Grey	Grey	Green	Greenish yellow	Grey	Grey	Blue	Red	Pink	White	Green
E E	Red	Red	Black	Black	Black	Black	Black	Yellow	Yellow	White	Red	Yellow	Black	Grey	Yellow	Black	Black	Green	Green	White	Yellow
O H	White	White	Blue	Light brown	Red	Yellow	*	White	Black	Orange	Black	Black	Dark red	Dark grey	Red	Orange	Red	White	White	Grey	Purple
O O	*	Coffee colour	Bluish green	Steel grey	Steel grey	Bluish grey	Deep blue	Blue	Pale brown	Black	Yellow	Yellow	Yellow	Black	Green	Green	Brown	Brown	Light blue	*	Brown

TABLE SHOWING THE COLOURS EXCITED BY THE ALPHABETICAL SYMBOLS IN SEVEN CASES.

Initials of subject.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
E. T.	Light green	Pink	White	Neutral	Magenta	Sepia	Brick red	Navy blue	Black	Pink	Brown	Ultramarine	Myrtle green	Emerald green	White	Grey	Orange	Brown	Fawn	Black	Green	Black (white edges)	Black	Crimson	Yellow	Pink
F. S.	Dark red	Light green	Yellow	Dark brown	Pale green	Light pink	Dark yellow	Terra cotta	Grey	Dark green	Pale blue	Dark grey	Red	Light red	Pink	*	Dark blue	Magenta	Blue	Light red	Grey	Dark red	Black	Purple	Red	Purple
I. P.	Black	Yellow	Yellow	*	Yellow	Blue	Blue	Yellow	White	Grey	*	Blue	Green	Brown	Olive	Orange	Green	Red	Pink	Scarlet	Straw colour	Purple	Black	Yellow	Green	*
M. P.	Red	Yellow	Yellow	*	Red	*	*	Green	Mauve	Purple	Green	Yellow	Green	Light blue	*	*	Red	*	Blue	Green	Orange	Mauve	Dark blue	*	Blue	*
W. T.	Yellow	Black	Green	*	Blue	Light brown	Black	Grey	Black	Dark red	Neutral	Light blue	*	Navy blue	Black	Brown	*	*	Light brown	Dark red	Light grey	Dark blue	White	*	Brown	Black
J. H.	White	Black	(speckled)	Dark blue	Bright yellow	Dark brown	Green	Grey	Red	Dark red	Yellow	Black	Brown	Light brown	Clay colour	Blue	Green	Slate	Black	Light blue	Green	Violet blue	Salmon	White	White	Green
E. L.	White	Brown	White	Brown	White	Black	Grey	Brown	Brown	Dark red	Black	White	Brown	Brown	White	Brown	Blue	White	Golden	*	White	Dark red	Light blue	White	Grey	Brown

No colour association.

of a more or less intense black, never with any colour. The phenomena are met with among men and women, and there is no marked preponderance in individuals of either sex; most statistics that have been collected show rather more males than females.

The extreme definiteness of the tint excited has been already referred to. Persons will take the utmost pains in trying to be exact in their descriptions of the exact shade of colour which is excited by a particular sound. So definite are they that Nussbaumer's brother, who was an accomplished musician, was said to be able to distinguish the colours of eleven overtones when a low note was sounded, and one of Gruber's subjects, a vocalist, was accustomed to check the accuracy of their singing by watching whether the correct tint was excited or not. I have met with a case in which a child used the faculty to correct her spelling, and a similar case is mentioned by Galton.

The invariability of the colour corresponding to each letter is very striking. In investigating this point one was obliged to trust chiefly to the memory of the person questioned. In one case, however, a lady had discovered that this faculty which she possessed was an unusual one and had noted down carefully all her colour associations three years before I had the opportunity of investigating her case, and I found that her record still corresponds exactly with her present sensations.

Perhaps the most striking feature about these phenomena is that they are never the same in two individuals. The closest correspondence I have met with was in the case of a mother and daughter, recorded by Suarez de Mendoza. The table which accompanies this paper shows in a concise form these marked individual differences. The cases are taken at random from published cases and also include some of the most marked of my own cases. Even when two individuals call the same vowel sound "blue," for example, they will disagree most emphatically as to the shade of blue. Few things are more ludicrous than to hear two persons who have this faculty discussing the sensations which a particular sound excites. "How could it possibly be red; of course it is blue," and so on. One of Steinbrügge's patients wrote as follows: "My mother associates different colours to mine for the same sound and gets quite angry when I insist on correcting her."

There are many persons who have these senations only with certain of the vowel sounds. For example, one of Flournoy's subjects, who has remarkably definite photisms with *a* and *i*, has none when the other vowel sounds are uttered. In most of these cases, however, the subjects are extremely positive as to colours—which they cannot be. One says, for instance, that "*o* might perhaps be red, but could not conceivably be blue." Only one-third of the subjects investigated by Flournoy and Claparède associated colours with all the letters of the alphabet.

As regards the character of the photism excited by the vowel sounds, in most cases it is described as appearing in the form of a sheet, frequently disc-shaped or square, but occasionally extending beyond the limits of the field of vision. The colours are almost always spoken of as transparent, or, as one described it, "like those of sunset." Many said that the surface was burnished or had a metallic sheen. In very few of my cases was there any very definite pattern or shape of the photism; but in one of Flournoy's *a* was a small chocolate square, while *i* was an orange circle, with an *i* in black in the centre. In the case of the alphabet &c. the photisms were in the form of coloured letters.

There is almost as much individuality among the subjects as to the details of the position of the photism as of the exact tint, but four groups may be drawn up: (1) In most cases the photism is not projected outside the body, but is referred to the back of the eyes or the inside of the head; (2) in others there is an apparent background of colour behind all actual objects in the field of vision, not obscuring them at all; (3) in others the colour appears to correspond with the site of origin of the sound, such as the mouth of a person speaking, the strings of a guitar, the slits in an organ pipe, &c.; and (4) in other cases the photism is projected into the visual field and may obscure objects, or its colour may blend with that of actual objects to produce another. The most striking instance is that recorded by Grüber, the subject being an eminent literary man in Roumania. His photism was of a circular form and appeared on any opaque object opposite him; it was of the same size, no matter how far away it was. If a yellow photism was excited by pronouncing a particular vowel, a red ring placed where it appeared to be was at once coloured a bright orange from the blending of the colour sensations.

It may be said first of all, concerning the nature of the phenomena, that they are not to be looked on as symptoms of a morbid brain condition. Careful inquiries by Bleuler, Lehmann, and Flournoy, and my own more limited observations, agree in showing that this faculty has no association whatever with mental disease or even with a neurotic heredity. There is no more disordered mental condition met with in those who possess this somewhat unusual faculty than there is any mental defect (speaking popularly) accompanying colour blindness. Against the next theory—viz., that there was an abnormal anatomical connexion between the lower centres for the reception of sensory impulses from the end organs, making it, so to speak, a physiological rather than a psychical phenomenon—it may be urged: 1. That only a few sounds produce these colour sensations, and that the only similarity between them is the similarity of the mental association they suggest—viz, that of a series; in fact, the colour sensations can be equally well evoked by thinking of the symbols of a sound, such as the alphabetical letters or the numerals. 2. That there is an absence of any harmonious resemblance between the auditory stimulus and the induced visual sensation—e.g., in connexion with the colours excited by the notes of the musical scale; it will be observed that there is no connexion between the wave length of the notes and that of their corresponding photism. The phenomena appear to me to be purely psychical and to be cases of mental association (illustrations of which are too familiar to be recited here) occurring in certain individuals, strongly hereditary, and corresponding, as Galton has shown with admirable clearness, with other exceptional mental faculties, such as the power of recalling a past scene at will, with all its details and colours, schemes and patterns, which the mind figures to itself in order to assist memorising and calculation—faculties which are far more frequent than so-called "colour hearing," and which no one dreams of attributing to any pathological condition or of associating with any unusual anatomical connexions of various parts of the brain. The term "colour hearing" as applied to these phenomena is awkward and misleading. The colour sensations may be excited, as has been seen, by auditory symbols as well as sounds, and there is no resemblance between the photisms excited by a spoken and a written *o*. The terms "synæsthesia" and "secondary colour sensations" are preferable, but do not sufficiently emphasise the fact that a mental association underlies the development of these secondary colour sensations. In some of Flournoy's cases a perceptible interval always occurred between the sound and the development of the photism. The origin of this mental association is involved in great difficulty and has led to much speculation. It is difficult to conceive how there could be any colour associated in early life with the spoken vowel sounds. With reference to the other subjects which most excite colour, it will have been noticed that they are the earliest things to be acquired when the education of a child is commenced. Kaiser in 1872 suggested that the association was first derived from the coloured letters in some book from which the alphabet &c. had been learned in early childhood. This is a simple and probable explanation, but at present positive evidence is wanting. Several recent observers have in their investigations paid special attention to this point without being able to confirm it, and the result of my own inquiries has been negative.

It is to be hoped that before long more information on this and other points may be obtained, when the knowledge of the existence of this faculty becomes more generally known, and the writer will be very grateful to receive from any readers of THE LANCET who may possess this faculty some account of their experiences. The following questions used by Flournoy and Claparède in their inquiry cannot be surpassed for simplicity and clearness: 1. What colour do the spoken vowel sounds *ah*, *eh*, *ee*, *oh*, *ou* possess? Indicate as minutely as possible the exact shade and the degree of brightness of the colour. 2. What colours have consonants, diphthongs, words, familiar noises, musical notes, numerals, days of the week, flavours, odours, &c.? 3. At what age did you first experience these phenomena? 4. Since that time have they become more or less distinct? 5. When did you first become aware that the faculty was an unusual one?

Wimpole-street, W.

No colour association.

SOME REMARKS ON CERTAIN PATHOLOGICAL CONDITIONS OF THE OVARIES ASSOCIATED WITH MENORRHAGIA.

BY C. J. BOND, F.R.C.S. ENG.,
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NOW that diseased appendages are removed at a much earlier stage of the morbid processes than formerly, and that oöphorectomy is probably a commoner operation than ovariotomy, much light has been thrown on certain early morbid states of the ovaries, some of which are associated with, if not the cause of, marked disturbance of uterine function. It is no doubt true that the Fallopian tube is so constantly included with the ovary in any operative procedure for the treatment or removal of the latter, that a corresponding association is apt to exist in the mind of the operator as to the functions of the two organs. No doubt pathological conditions of the tubes, especially those which produce cystic distension, are frequently found in cases of menorrhagia, but is it not most usual to find in these cases of cystic salpingitis corresponding inflammatory changes in or around the ovaries, including the latter within the diseased area? On the other hand, pathological conditions of the ovaries such as those to be mentioned later, of which menorrhagia is often a prominent symptom, are frequently found in connexion with perfectly normal conditions of the tubes, and it is only cases of such a kind where the tubes are healthy that I propose to include in these remarks.

In looking through the notes of some fifty cases of removal of ovaries or appendages for various causes, which have come under my care during the last few years, there is a small group of eight cases in which small cystic ovaries were removed, in which the tubes were healthy, and in five of which the prominent symptom was menorrhagia of a pronounced type, being in three of them of a most violent kind—as violent and uncontrollable as is found in the worst cases of fibroids and immediately threatening life. In these five cases the ovaries were of the type described by Lawson Tait, Pozzi, and others as the "small cystic ovary." That is, although there was some considerable amount of ovarian tissue left, yet, in addition to a marked connective tissue proliferation or oöphoritis, the organs contained several, or numerous cysts varying in size from that of a nut to that of a walnut or larger; and a further point to which I would draw attention is the fact that these cysts contained dark blood-stained serum—there had been, in fact, extravasation of blood into the cystic cavities, and thus an indication is given of the amount of ovarian engorgement in these cases. In the remaining three cases the cysts contained clear fluid, the marked congestion was absent, and the symptoms lacked the pronounced one of excessive menorrhagia, although prominent menstrual disturbance of a painful and nervous kind was present. It has, of course, been known for some time that these small cystic ovaries are frequently associated with menorrhagia. This has been pointed out by Lawson Tait[1] and by Pozzi[2]; but I doubt whether it is even yet sufficiently realised by medical practitioners, that persistent and violent menorrhagia, uncontrollable by curetting, may, and does, occur with a normal, or only slightly enlarged, uterus, and is due to ovarian disease alone. There is, I think, no doubt that the connexion between the sanguinolent character of the cyst contents and the excessive uterine hæmorrhage is more than a mere coincidence. The blood-stained fluid means severe ovarian engorgement, leading to extravasation, and it is probable that an engorged ovary provides a more powerful stimulus to the menstrual process than a healthy one.

In spite of the absence of direct evidence of the part played by the various organs in the menstrual process, one may, I think, usefully adopt as a working hypothesis a modification of the scheme of the menstrual nervous mechanism suggested by Martin[3] and regard it as consisting of a spinal centre in the lumbar region not far from the centre for parturition. This receives afferent impressions from the ovary by way of the ovarian plexus, from the uterus, and from distant parts—such as the breast and the brain—the efferent channels from this centre pass to the uterus along the uterine nerves in the broad ligament. One may, in fact, regard the ovarian tissue as the peripheral end organ of one of the afferent channels.

As regards the nature of the stimulus, or the manner in which the ovary affects the uterus, it is, I think, clear from much recorded evidence of the condition of the ovaries removed during menstruation, that ovulation and menstruation are not necessarily synchronous—the former precedes the onset of menstruation by many years, and may go on after the latter has ceased. The ovary appears rather to influence the uterus by means of a continuous and steady nervous impulse, tending to stimulate the development and changes of the mucous membrane in so far as these are concerned in providing a nidus for the ovum, and acts in the way of causing the renewal of decidual development after each parturition or menstrual period, rather than in bringing about its destruction by menstruation. The ovary acts, as a whole, upon the uterus in the same way that a single ovum within the uterus acts upon it. If the ovarian stimulus be thus continuous and constructive in its character, one must look elsewhere for an explanation of the destructive and periodic phenomena which are so characteristic of menstruation. In speculating for a moment as to the steps by which this apparently useless function has been evolved in organic life, it is a suggestive fact, that, owing perhaps to a more regular and even food-supply, and protection from climatic influences which affect the young progeny, an alteration in ovarian fertility has occurred in the human species, so that one or a few mature ova are produced at frequent intervals during fertile life, instead of a larger number of ova at longer intervals. Accompanying this change in ovarian activity there has also been brought about a corresponding change in uterine activity, which I would explain as follows. It is probable, for several reasons, that the natural life of the epithelial lining of that portion of the oviduct specially differentiated for the reception of the ovum is, or rather must be, a comparatively short one—that is, an impregnated ovum, if it is to become attached and grow, it requires a young membrane, or one from which the older epithelial cells have been shed, in which it can become imbedded; and it may be that the closer and more highly developed the utero-fœtal connexion—in other words, the placenta—the more is this a matter of importance. In the case of the lower animals, in which ovulation, or rather the possibility of impregnation, occurs at at relatively long intervals, this change in the uterine mucous surface is accomplished by a gradual absorption of the older cell elements and regeneration of new ones by atrophy and lymphatic absorption, without any visible external escape of blood or throwing off of epithelium. The higher apes appear to stand in an intermediate position, and the increased cellular infiltration of the membrane at the œstrual periods of these animals, as described by Bland Sutton, supports this view. In fact, menstruation is a more rapid way of getting rid of an epithelial surface no longer fit to serve as a nidus for the growing ovum, the increased rapidity being necessitated by the more frequent ovulation and opportunities of impregnation, or the constant condition of receptivity characteristic of the human female. Löwenthal, taking a view somewhat like this, attributes the growth and shedding of the epithelial lining in the human uterus, to the influence of the unimpregnated ovum in contact with it, and he regards the life of the two as coterminous; in this I think he errs, as in such a case the advent of a second ovum from the same, or the other ovary, before the death of the first, would keep alive the epithelial surface, and so there would frequently be arrest of menstruation without pregnancy, whereas this does not occur in physiological health. Thus, though the occurrence of menstruation may be quite independent in point of time with the maturation and rupture of the Graafian follicle, yet the process is a highly specialised form of the nidation changes which occur in the oviduct in a cyclical manner, and is dependent on and subservient to the ovarian function. Thus menstruation is really analogous to parturition, while during pregnancy the strong stimulus of the growing, impregnated ovum prevents the degeneration and shedding of the epithelial surface on which it is implanted, and prolongs its life for a period of time which has a definite relation to the menstrual cycle.

In the case of those lower animals, chiefly smaller ones, in which, relatively to their size, food supply is abundant and climatic influence is modified by habits—such as rats, mice, and rabbits, in which ovulation and impregnation, or the opportunities for it, occur at frequent intervals—it would

[1] Disease of the Ovaries, fourth edition, 1884.
[2] Treatise on Gynæcology.
[3] Provincial Medical Journal, December, 1893.

at first sight appear as if some process of menstruation would be necessary in their case, as in the human species, to bring about the more rapid removal and renewal of the membrane necessitated by the more frequent ovulation or cycle of nidation; but it must be remembered that in the state of nature, the opportunity of impregnation is practically coexistent and synchronous with ovulation, and so parturition rapidly accomplishes for such animals at the end of the cycle, that which menstruation effects in unimpregnated women, or the slower process of absorption in the animals which ovulate at longer intervals.

To sum up, it appears that ovulation and nidation, of which menstruation is a specialised form, evolved to meet certain altered conditions of life, are both dependent, as regards their frequency and periodicity, on the periods of receptivity of the animal to sexual congress or the œstrus, and that these latter are again determined by climatic conditions and food-supply, operating by means of natural selection on the production and rearing of progeny. Further, it appears that, ovulation and nidation, or menstruation, having thus been associated together so long in one nervous mechanism, any interference with the one, as by removal of the ovaries, inhibits or interferes with the other. Be this as it may, by the supposition of some such nerve mechanism, it is more easy to understand how the menstrual process itself may be inhibited, or altered by any interference with the afferent channel, consisting of ovary and ovarian nerves, or with the centre in the spinal cord, or with the efferent nerves passing to the uterus by way of the broad ligament; thus complete removal of both ovaries removes the whole of the afferent end organ, while removal of the tubes, and other operations on the broad ligament, are effective only in so far as they obliterate the afferent or efferent channels, or in some cases interfere with the vascular supply. By some such hypothesis, too, one may interpret the fact that, in the worst cases of menorrhagia due to ovarian causes, menstruation is often painless, while in other cases in which menorrhagia is not a prominent symptom the pain and other nervous manifestations are very marked, as though the afferent impulses from the ovary in the first case were reflected downwards from the centre to the uterus in a trophic and secretory stream, and in the latter case upwards to the brain along the sensory channels. This at present unfortunately lacks the support or the contradiction of experimental investigation; some light on the nervous mechanism might, however, perhaps be thrown by the clinical observation of spinal injury in the female.

But to return to the small cystic ovary. The differences between this form and the ovary affected with the large cysts of the ovarian cystoma capable of indefinite growth are very marked clinically, since the latter form has very little influence on the menstrual process, and from the researches of Gallard it appears to as frequently cause a diminished flow as an increased one. Secondly, pathologically, the researches of many observers—Waldeyer, Doran, and others—seem to show that the ordinary ovarian cystoma originates in an epithelial overgrowth of a glandular type, with minor differences peculiar to the various forms of cyst. On the other hand, the early changes in the small cystic variety have not been fully worked out; it has, however, no tendency to pass into the common form of cystoma, and from the examination of numbers of sections of such ovaries removed by myself it appears, I think, certain that the early change is one of epithelial degeneration rather than growth, with effusion or extravasation into such degenerated follicles, which become recognised as cysts. Such sections show a more or less irregular cavity filled with the coagulated serous or bloody material, and this merges directly into the fibro-vascular tunic without the intervention of an epithelial layer. Sometimes some epithelium can be found in an irregular and degenerated condition, and the surrounding ovarian stroma shows all degrees of connective tissue overgrowth, the result of oöphoritis, and the surface of the organ often has a toughened, leathery, dull character from the same cause. It is, I think, clear that these cysts originate in Graafian follicles, which perhaps in a few cases undergo a pathological change after rupture. In some rarer cases cystic change may occur in a corpus luteum itself, as mentioned by Pozzi, or more often in those cysts which, more deeply placed in the substance of the ovary, fail to reach the surface, perhaps owing to the increased fibrous character of the ovarian tissue, and which undergo the cystic degeneration without even rupturing at all. The main feature of the change is that of disordered involution. Extravasation occurs from the surrounding vessels into the cavity, and, lacking the safety valve of the normal rupture at the time of shedding the ova, the follicles tend to enlarge mechanically up to a certain limited size, as opposed to the unlimited enlargement by epithelial growth, and secretion, of the larger cystomata. The real difference between the condition of the small cystic ovary, which increases the menstrual flow, and the ovary in ordinary cystoma, which does not affect it, is one of vascularity and function; in the former case there is vascular engorgement and cysts which in the early stages are functionally active; in the latter there is less vascularity and functionless cysts as far as ovulation is concerned, and the irritated or small cystic ovary, by transmitting a stronger stimulus of nidation, causes a more vascular uterus, with a corresponding increase of hæmorrhage when the membrane is shed and extravasation occurs. It is, in fact, as if the exaggerated change which occurs in a ruptured follicle with pregnancy, which is dignified by the name of "corpus luteum," occurred in an unruptured follicle in an exaggerated degree, as if the ovarian stimulus were one of constant pregnancy or overgrowth of decidual membrane, while the uterus lacks the inhibitory influence of the encapsuled ovum to prevent its breaking down. A true view of the pathology of such ovarian disease would, I think, regard it as an advanced condition of the state which is found in many ovaries, even in those of young unmarried women; such ovaries are called "normal," and they are so in the sense that they cause no symptoms or disorders of menstruation, but the condition is really pathological, in the sense that the normal evolution and involution of the follicle are not carried out, and it is an interesting point as to the generality and existence of this faulty physiology in the various grades of the animal kingdom. It is known that mares are especially liable to the change. The fact that all stages can be found, between the so-called normal ovary and the small cystic ovary which produces such marked symptoms, is a strong argument in favour of the view that the latter condition is the terminal stage in a pathological series.

Clinically, these small cystic ovaries not only cause increased menstruation, but in some cases increase in size of the body of the uterus—not necessarily increase of area of cavity, but increase in the thickness of the uterine wall; the organ is in these cases big, sodden, and heavy, and it is possible that some cases, which show a great tendency to flooding after miscarriages, are caused by a want of uterine vigour and tone, being thus indirectly due to diseased ovaries, and that, in the cases of unexplained recurring tendency to early abortion, the real source of the disease is the excessive ovarian stimulus to the spinal centres, overcoming the inhibitory influence of the growing ovum, and thus producing a menstruation or early parturition. And if the lesson of the use of the pessary in uterine displacement be fairly studied it will, I think, be found to be more and more the case that so-called displacements of a normal uterus cause but few symptoms when the appendages are healthy, but that where uterine displacements do cause symptoms, those symptoms are either due to, or exaggerated by, the abnormal condition of the ovaries or tubes upon which the displacement acts. These small cystic ovaries also in some cases prolong menstruation long after the normal period of uterine involution. I have seen one case of somewhat excessive menstruation at the age of fifty-eight in which the ovaries were cystic. In cases of uterine fibroids the ovaries are frequently cystic, as has been mentioned by Lawson Tait, and I have several times seen the cyst contents sanguinolent in this affection. How far the ovarian change is a secondary one, or how far it has a primary influence in producing not only the menorrhagia, but also the overgrowth in the uterus, it is not possible to say at present. Many cases, however, occur in which the ovaries are not cystic, and on the other hand the engorgement of the uterus may extend to the ovary and produce by increased congestion the pathological change in the follicles; this is rendered probable by the fact that an enlarging uterus in the case of pregnancy exercises some influence on the ovaries, as is shown by the peculiarities of the formation of the corpus luteum.

With regard to the treatment of these cases, a true appreciation of their pathology, and a recognition of the ovarian origin of the uterine symptoms, will lead to a more rational and therefore a more successful, treatment. The futility of curetting as a means of permanent cure and the uselessness of all forms of merely intra-uterine medication or mechanical treatment, except as palliative means, will be understood; the pelvis will be more frequently explored from above, and

the ovaries themselves will be treated. While it is right to have certain rules clearly defined in one's own mind as guides in coming to a decision, in each individual case, as to the desirability, or otherwise, of removal of the ovaries, the subject is still too much the battle-ground of gynæcological opinion to allow the expression of any dogmatic statement. Personally, I should be inclined to say that where, in the absence of other causes, there is reason to believe that the cause of the symptoms lies in the ovaries, and that further the symptoms are of sufficient intensity to either endanger life or to lead to chronic invalidism, a case is made out for abdominal section and exploration; that, further, having the appendages within sight, or touch, or both, the guide should be as follows: Any gross disease of tubes or markedly pathological state of ovaries of course decides the point at once, whereas in the case of lesser degrees of pathological change, where the oöphoritis is not very marked or the cysts are few and small, the fact already mentioned—namely, that such a condition is in reality one stage in a pathological series from normality to marked disease—should be borne in mind, and the decision should be taken, not so much on the amount of disease detectable by sight or touch in the ovaries, as on the intensity of the symptoms, and especially the clearness of the evidence which connects them with an ovarian origin, and the absence of other evidence, especially of central nervous system origin. Hitherto I have spoken only of total removal of the diseased organs, but already there has been suggested and put into practice—notably by Pozzi and others—a conservative treatment of the appendages; it consists in the freeing and replacement of adherent and displaced organs and in the evacuation of small cysts, with the destruction of their lining membrane by cauterisation. As far as conservative treatment is concerned with the liberation of adherent organs and the replacement of displaced ones, there can, I think, be no doubt that the principle is sound and the future promising; but, when dealing with such morbid conditions as the cystic change mentioned above, it is necessary to speak with caution, for if the functional origin of these cysts is borne in mind it is, I think, justifiable to express a doubt whether an ovary which has commenced to functionate in this abnormal manner will not continue to do so even after the evacuation and cauterisation of any cysts already formed.

I have so far spoken only of this special and peculiar change in the ovary, characterised by a fibrous overgrowth due to oöphoritis, and the presence of small cysts as a cause of menorrhagia, and for this condition radical treatment is required. The experience of every one will of course suggest the association of menorrhagia of varying degrees of severity with less advanced pathological changes—for instance, a common cause of minor degrees of menorrhagia is a prolapsed, and therefore a congested, ovary, with its periodic hypercongestion at the monthly periods; there are also the various causes which produce congestion of the ovary without displacement.

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FOUR CASES OF EXTRA-UTERINE GESTATION SUCCESSFULLY TREATED BY ABDOMINAL SECTION.[1]

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IT so happened that between the months of May and November, 1893, four cases of ectopic gestation (all within the first four months of pregnancy) came under my notice at the Chelsea Hospital for Women. The first case was sent to me by Mr. Farr of Kensington, who had already diagnosed the condition, while the other three cases were, or had been, under my care as out-patients, and were sent into the hospital by me. The second and fourth cases went into Dr. Travers' beds and were successfully operated on by him; while the third case, like the first, was under my charge. Individually they appear to me to present many points of interest, all of which it is impossible to touch upon here; while taken together they illustrate very clearly some of the difficulties of diagnosis and pathological possibilities associated with this special condition. The notes of each case are abbreviated as much as possible in regard to operation and after results, partly because the cases did well, and partly because I feel that the main interest must lie in the previous history, condition on admission to hospital, and diagnosis.

CASE 1.—A woman thirty years of age; she had been married eight years, and was the mother of two children, the last child being born four years ago; she had had no miscarriage. The catamenia were regular till fourteen weeks previously. There was a slight show one week since for a night and day; clot and something fleshy were passed. Morning sickness had been present, but there was no fulness or pain in the mammæ. Seventeen days ago (May 2nd) the patient felt sudden pain while lying in bed, with faintness and sickness. The pain, which was like that at the menstrual period, was felt in the right lower abdomen, where for three months previously she had been liable to intermittent, twisting, nauseating pain, irrespective of the position of the body. She had suffered from chronic pain in the right inguinal region of quite a different character during the last two years. She had been laid up since the onset of the pain seventeen days previously. That attack lasted two hours. The next day (the 3rd) similar pain was again experienced for about one hour. On the 17th, in the morning, a third attack of pain, this time more severe, was experienced. On this occasion she fainted. Mr. James Farr was called in and diagnosed ruptured tubal gestation, with which opinion his brother (Mr. Farr) agreed.

On admission to the Chelsea Hospital for Women the patient looked very ill and blanched, with that drawn expression of the features so suggestive of abdominal trouble and pain. The temperature was 97·8° F., the pulse 104, and the respiration 28. On examination the mammæ were found to be somewhat enlarged; there was some darkening of the areolæ; drops of watery secretion could with difficulty be obtained; there was slight general abdominal fulness; tenderness was not general, but across the lower abdomen, especially in the right inguinal region, where on light palpation was felt a roundish mass—not very hard—rising to about two inches below the umbilicus, and extending from the central line almost to the ileum. Over this region there was dulness on percussion, whereas on the left side the percussion note was clear. On examination per vaginam the cervix was found to be fairly hard to the left of the median line. The uterus was apparently pushed over to the left by a mass which occupied the right fornix. This mass was continuous with the mass felt per hypogastrium; it gave the idea of a rounded elongated tense semi-solid mass. In Douglas' pouch there was felt a rather harder rounded mass, only a slight depression separating it from the former. To the right of the cervix, as the finger passed on to the mass, there was felt a vessel distinctly pulsating. Nothing further was elucidated per rectum. A consultation was at once held, and an immediate operation was decided upon.

After ether was administered the usual abdominal incision was made. On opening the peritoneal cavity blood welled up. The mass previously felt proved clearly to be a much distended right tube, pushing a somewhat enlarged uterus over to the left. It was drawn up gently, a bleeding point was temporarily controlled, a double silk ligature was tied close up to the uterus, and the mass was removed. On mopping out Douglas' pouch with a sponge a large blood clot was turned out in which the fœtus was enveloped. About eight ounces of fluid blood, besides many clots, were removed during the operation. The abdominal cavity was freely washed out with hot water, all clots removed, a Keith's glass drainage-tube inserted, and the wound brought together. The progress of the case was for the first fourteen days satisfactory. The drainage-tube was removed at the end of forty-eight hours, two ounces of red-coloured fluid only being drawn off, notwithstanding that a considerable quantity of water had been left in at the operation. The only cause for any anxiety lay in the pulse, which varied from 130 to 140 during the forty-eight hours after the operation. The patient was consequently fed with nutrient enemata and brandy every four hours. The general condition slowly improved; but though the pulse fell to 104 on the fifth day it was still over 100 on the tenth day. No doubt there was a distinct nervous element in it. The vascular condition at this time existing probably accounted for the "white swelling" which began to manifest itself in the left leg on the sixteenth day. This condition, after being acute for three days, gradually subsided, and the patient was sent to the convalescent home six weeks after the operation.

[1] A paper read before the West London Medico-Chirurgical Society on Jan. 5th, 1894, when specimens were also shown.

Dr. Shaw Mackenzie's (pathologist to the hospital) report.—"It consists of dilated ruptured tube and fœtus aged two months and a half. The tube and contents as removed consist of an elongated oval mass, on splitting which longitudinally a well-formed placental mass and blood clot are seen distending the tube. Rupture has occurred primarily downwards into the broad ligament, but upwards also, and this accounted for much hæmorrhage into the abdominal cavity and escape of the fœtus."

CASE 2.—This patient, thirty-four years of age, was married a second time fourteen months since, after seven years' widowhood. She was the mother of two children by her first husband, the youngest being eight years old. The catamenia had always been irregular and painful, continuing for from seven to ten days; the loss was very free. The patient aborted in September, 1892 (nine months previously), a two months' fœtus; she was out of health for some time afterwards. She thought that she again became pregnant in February, 1893. Some weeks later, after lifting a heavy weight, she was seized with violent pain and fainted. There was no loss per vaginam. She did her work for a fortnight, but grew steadily weaker. Her medical attendant ordered her complete rest, fearing another abortion. Much pain was felt over the abdomen, for which poultices were applied. Two weeks after the onset of this last attack a slight brownish discharge occurred and persisted. Her general health steadily deteriorated and febrile symptoms set in. I was asked to see her in consultation with her medical man, and feeling that the diagnosis pointed strongly to ruptured tubal gestation suggested removal to hospital. She came at once and was placed in one of Dr. Travers' beds. This was on May 25th, six weeks after this illness had commenced. Her temperature on admission was 100 2° F., the pulse being 120; she looked very ill and anæmic, but not at all presenting the appearance of one suffering from internal hæmorrhage. The abdomen was very tender all over, markedly so over the right iliac region, and towards the umbilicus, making bimanual examination impossible. On vaginal examination a sausage-shaped mass was felt in Douglas' pouch, fixed to the uterus; above this, high up, a rounded body existed. There were no symptoms of collapse. After two days' watching, as it was evident she was becoming generally worse, Dr. Travers opened the abdomen; blood showed clearly within the peritoneal cavity through the unopened peritoneum, and on its incision founted out freely; the cavity contained much clot and liquid blood. The mass above noted was found to be the right tube enlarged, much torn in its outer third, and grasping a rounded lump of seemingly placental tissue. The hæmorrhage was still very free, sufficiently so—despite rapid sponging—to prevent any good view of the state of the parts. The right appendage was tied at once, which checked the hæmorrhage for the most part, but in separating the tube from the posterior wall of the uterus, to which it was very firmly adherent, the blood again flowed freely; the appendage on the opposite side was therefore secured, when at once all hæmorrhage ceased. The right tube and its contents were now removed, the cavity of the abdomen was well washed out, and a drainage-tube was placed in, but removed at the end of twenty-eight hours. Some eight ounces of water were purposely left in; this was very rapidly absorbed. The patient caused no further anxiety. The temperature never rose above 100°; she convalesced very rapidly and was sent to St. Leonard's on the twenty-third day.

Dr. Shaw Mackenzie's report.—"The specimen consists of a dilated and ruptured tube with a well-formed placental mass, and blood clot the size of a small Tangerine orange, which in a recent condition occupied the tube at the site of rupture. The fimbriæ of the tube are well marked. Corresponds to eight weeks' pregnancy."

CASE 3.—This patient was twenty-nine years of age, had been married five years, but was never pregnant. Note when first seen: "She had never missed any period and the catamenia were regular every thirty days; the last period occurred three weeks and a half ago, the duration was four days, and the quantity was normal. Ten days ago a slight show continued for several days. The next day the patient felt sudden pain in the morning in the left inguinal region; it lasted two hours. Five days ago she experienced pain again while lying in bed. The pain came on again yesterday while the patient was washing. This was the worst of the three attacks and lasted for one hour and a half." She felt no pain when first seen. On examination, lying slightly to the left of the uterus, which was about normal size and position, was an apparently enlarged and tender tube. The cervix was not enlarged, but it was somewhat softened. The patient thought her breasts had become larger, but she was not sure. There was some mammary pain, but nothing definite noticeable. The temperature was 100° F. I admitted her at once as a suspicious case. All the symptoms disappeared while the patient lay in bed. At the end of a week her period came on to date, lasting four days; the quantity was as usual. She experienced some pain, but it was not very marked. The next examination records that behind and to the left of the uterus a semi-mobile swelling was felt, as though the ovary and tube were prolapsed. As the patient lived very close to the hospital she was anxious to go home, and promised to go to bed on reaching there. Six weeks later she came on my out-patient day, reporting another attack of severe pain in the right inguinal region and hypogastrium. The catamenia were regular, but profuse in amount; otherwise she was well. On examination the mass appeared to be distinctly larger, being about the size of a Tangerine orange. A pulsating vessel could be felt to the left of the cervix, along the under-surface of the mass, which was fairly mobile and felt like a distended tube. I admitted her at once, and decided after consultation to explore. The left appendages were easily brought to the surface and were found to consist of tube thickened at its uterine end with a distended cystic ampulla, about the size of a Tangerine orange, in close relation to the enlarged apoplectic ovary. The specimen was removed entire and handed to Dr. Eden, pathologist to the hospital, for careful examination. The convalescence of the patient was only retarded by a small superficial abscess in the lower angle of the abdominal wound.

Dr. Eden's report.—"The parts removed consist of the left Fallopian tube, ovary, and part of the broad ligament. The outer half of the Fallopian tube was distended, forming an oval swelling about the size of a Tangerine orange. This swelling was tense and fluctuating, its contents being evidently fluid. The ovary was enlarged to the size of a pigeon's egg, with a large ragged-edged cavity in its substance containing thick granular blood clot. The entire specimen was frozen in bulk before being opened in order to preserve the relations of parts. The tube was found to contain nothing but blood clot adherent in parts to the wall of the tube. No trace could be found, to the naked eye, of fœtus or fœtal appendages. The proximal part of the tube was the seat of considerable saccular dilatation. The uterine opening of the tube was free, the fimbriated end was closed, and no trace of its fimbriæ could be found. Portions of the blood clot taken from three different parts were hardened in Müller's fluid, cut in paraffin, and stained with picro-carmine. Microscopic examination showed (1) that the blood clot has been formed in successive effusions of blood; in parts it was organising, in others it consisted of aggregations of red blood cells; and (2) in each portion were numerous altered chorionic villi embedded in the blood clot. In some the substance of the villi was changed into light fibrous tissue, with disappearance of vessels, while in many the covering of cutical epithelium remained well marked. The case is, therefore, one of tubal pregnancy in which the ovum has been destroyed by repeated hæmorrhages and aborted, leaving chorionic villi only."

CASE 4.—This patient, thirty-six years of age, had always enjoyed good health; she was the mother of ten children, the last being born five months ago; she had had two miscarriages. The labour was natural; she was in bed fourteen days. The child was suckled one month. The catamenia since the confinement have been irregular, coming on from every two to four weeks and lasting from four to seven days. The loss was free, the discharge being yellow and sometimes tinged with blood. Eight weeks ago she got wet through and was laid up on the next day with sudden abdominal pain in the right inguinal region, attended with dysuria. The acuteness of pain gradually diminished, but there was still a marked tendency to right-sided lower abdominal pain with bearing down on standing. On examination a sanguineous discharge was found. The cervix was soft, but otherwise natural. The uterus was in normal position, but somewhat enlarged. Behind and extending into both fornices there was a very tender, apparently inflammatory mass. The patient was admitted into hospital and improved much with rest and treatment; her pain disappeared and the discharge ceased. Three weeks later a note was made to the effect that the period was just over and that she had gone through it with less pain than she had experienced recently. There was still a rounded mass in Douglas' pouch intimately associated with the uterus,

but not extending into the broad ligament; it was much less tender than the above mass. The sound passed three inches and a half. The woman wished to go home. As she could rest there she was allowed to do so on condition that she did rest. Seventeen days afterwards I was asked to see her, as she had been seized with fresh acute pain in the night, which no applications relieved. By the time I saw her the patient was much better, and there was no appearance of collapse. On examination the mass seemed to be distinctly larger and softer. She was conveyed to the hospital at once, and came under Dr. Travers' care. The diagnosis as to the exact nature of the mass was extremely difficult, and it seemed to point to a pyo-salpinx with surrounding inflammatory infiltration. An exploratory operation was decided on, and Dr. Travers on the same day opened the abdomen. To the right and behind the uterus was found a rounded tense mass passing right down into Douglas' pouch, and intimately adherent to the uterus and the pelvic peritoneum. This mass, the size of a large orange, was apparently the distended right tube. In freeing the adhesions the tumour proved to be very friable and gave way, admitting the finger into partially organised blood clot; from the rent an oval body was extracted of the size of a walnut resembling an apoplectic ovum. The left ovary displayed a small cyst on its surface; this was punctured and the ovary returned. The pelvis was well washed out, a Keith's drainage-tube was inserted, and the wound was brought together in the usual manner. The patient made an excellent recovery, being only troubled at the end of her convalescence with an urticarious rash.

Dr. Eden's report.—"The specimen consists of an ovary, a portion of the Fallopian tube, and what is apparently a piece of a cyst wall. The cyst wall is four inches and a half by two inches and a half. Its outer aspect is covered by peritoneum roughened from adhesions, its inner wall is ragged and irregularly convoluted, and is covered by easily detached blood clot. The cyst wall is firmly adherent to the remains of the tube and the meso-salpinx; the fimbriated end of the tube opens on the inner aspect of the cyst wall, the fimbriæ being clearly defined. The tube itself is much thickened and altered. The ovary appears to be normal and contains a recent corpus luteum. Microscopic examination shows the material on the inner aspect of the cyst wall to consist of degenerated placental tissue with chorionic villi and evidence of successive hæmorrhages." (The full report is too long to quote here.)

Such is the brief history of these four cases, each differing very considerably in many respects from the others and furnishing no very clear series of symptoms by which they might be recognised in the early stage, even when they did come under medical supervision. Case 1 may be taken as what is considered a typical instance of ruptured tubal gestation. The patient's general health was good. Amenorrhœa had lasted for fourteen weeks, there being a slight show recently with blood clot. One or more sharp attacks of pain came on suddenly in one of the inguinal regions, without necessarily any apparent cause (as when in bed), the last attack being accompanied by fainting and collapse. Abdominal section revealed the bleeding and ruptured tube and a fœtus in the abdominal cavity. The difference in symptoms between this case and Cases 2 and 4 was due no doubt to the different date of rupture. In Case 2 the rupture and consequent hæmorrhage presumably took place six weeks before admission to hospital. This was followed by other small hæmorrhages associated with local peritonitis; the ovum ceased to develop, though the placenta had continued to grow for a time. In Case 4 the rupture must also have taken place very early, seeing that it apparently occurred seven weeks after confinement and the placenta must then have begun to degenerate. Case 3 is from one point of view the most interesting of the four, for the reason that it was watched as a suspicious case of tubal gestation for two months before operation, and that the unruptured tube, when removed, proved to contain products of gestation. There are very few instances of such removal. Mr. Lawson Tait, in 1888, wrote in his work on "Ectopic Gestation": "I am of opinion that there is no authentic description of an unruptured tube pregnancy." Mr. Bland Sutton, in 1891, wrote: "Herman's case, in which he diagnosed tubal pregnancy, and operated before rupture had taken place, is as yet without parallel." Since that date three unruptured tubes, removed from cases where tubal pregnancy was diagnosed, have been shown at the Obstetrical Society, and reported on by committees appointed for the purpose. Dr. Cullingworth supplied two of the specimens and Dr. Playfair one. One of Dr. Cullingworth's was reported to be clearly a gravid tube in two compartments, containing placenta and fœtus and clot with no evidence of rupture. In the other two cases no evidence of chorionic villi was found by the committee. In the *British Gynæcological Journal* of August, 1892, Dr. Cleghorn of New Zealand, in his series of five cases of ectopic gestation (the specimens of which were very carefully examined by Dr. Shaw Mackenzie and reported on), there was one in which he diagnosed a tubal gestation, and removed an unruptured and gravid tube of seven weeks' gestation. There have been no doubt others, the reports of which I have missed, but it is evident that such cases are rare, and that for two main reasons: (1) that in most cases the patients do not consult the medical man till rupture has taken place; and (2) that when they do consult him before rupture the diagnosis may be very difficult. A microscopic section showing chorionic villi from this unruptured tube was shown by Dr. Eden at the Obstetrical Society, and a committee has been appointed to report upon the whole case. The ages of these four patients were twenty-nine, thirty, thirty-four, and thirty-six years respectively. Of sixty other cases I have referred to I see the youngest was twenty-two years of age, while three were forty-four years of age, and the list, which is too long to introduce here, seems merely to indicate that women are more prone to this trouble during the most active child-bearing period of their lives. In three of the four cases there had been a period of actual or relative sterility varying from four to eight years. This is so far in accord with general experience, but the fourth case completely broke this rule, seeing that she had been confined only eleven weeks before pain occurred. Dr. Eden's report on this curiously bears out the clinical history. The patient suckled the infant for one month. She probably became pregnant soon after: rupture took place at about the seventh week—two months before admission to hospital. Both ovum and placenta continued to develop for a short time; the ovum then became apoplectic and the placenta underwent degeneration. Nor is the catamenial history consistent, for though in the first and second cases amenorrhœa existed for twelve and a half weeks and six weeks respectively before the first attack of pain and the patients fancied themselves pregnant, in Case 3 no period was missed; while in Case 4 the periods since the recent confinement were too frequent—viz., between every two and three weeks, lasting from four to seven days. The general symptoms were very slight. In one case there was morning sickness. There were no marked mammary symptoms in any of the cases. Micturition was frequent or painful in two. The only two symptoms common to all were: (1) irregular hæmorrhage not associated with the catamenia; it varied in quantity from a slight show to free loss, with clot; and (2) pain, which in each of these cases, as in others, was paroxysmal in nature in one or other ovarian region, coming on quite suddenly, lasting in acute form for a varying period and without any apparent external cause. The pain was referred to one or other inguinal region, and was followed, when intense and prolonged, by collapse. This symptom of pain is no doubt the most characteristic of all. Though it may, when marked, clear up the diagnosis, it unfortunately, at the same time, generally indicates that the tube has given way. Physical examination showed a slightly enlarged uterus with somewhat softened cervix. In Cases 2 and 4, on one side or other of the uterus, there was an elongated, rounded, fairly hard (not really doughy as sometimes described) mass, varying in size and closely associated with the uterus. In Case 3, where the tube was unruptured, the fact of its being a dilated tube was fairly clear. The presence of a pulsating vessel passing from the cervix along the lower aspect of the tumour, which Dr. Cleghorn (perhaps more than others) observed in all his cases, was noted in two of these (in one before and in the other after rupture). It will be noticed that the three tubes in which rupture had taken place burst intra-peritoneally and not into the broad ligament. The dates of the ruptures varied from about six weeks to twelve weeks. It was of these intra-peritoneal tubal ruptures that Parr wrote (before the days of prompt operative interference) and Mr. Lawson Tait has quoted: "A few women have recovered, though the number is very small—so small that when one is called to a case of the kind it is one's duty to look upon the unfortunate patient as inevitably doomed to die." From several sources I have collected reports of some eighty-five cases operated on, giving a result of seventy-five cured and ten deaths. I am

glad to say that both Dr. Travers' and my cases made excellent recoveries. These four cases, as far as they go, tend to strengthen the dictum of Mr. Lawson Tait that by far the larger number of cases of hæmato-salpinx have their starting point in a tubal gestation, and it would seem that in a more general recognition of this fact lies the hope of obtaining more accurate and exact means of diagnosis.

CASE OF
PULSATING EXOPHTHALMOS FOLLOWING LABOUR, AND COMPLICATED WITH GLAUCOMA, CURED BY LIGATURE OF THE COMMON CAROTID ARTERY.

BY F. H. KNAGGS, M.R.C.S. ENG., L.R.C.P. LOND.

THOUGH some difference of opinion may exist as to the true nature of the following case, the success that followed ligature of the carotid artery was so marked that I am induced to place the facts upon record, in support of Mr. G. E. Walker's plea for early ligature in all similar cases. The patient was a healthy woman aged twenty-four. Her husband had suffered from interstitial keratitis, but neither she nor her child have at any time shown any sign of a specific taint. She was attended in her first confinement in August, 1893, by Mr. Overton, when nothing unusual occurred, and I am indebted to him for the following facts. Twenty-nine hours after delivery she was suddenly seized with a severe stabbing pain over the outer and upper angle of the left orbit, with a peculiar buzzing noise in the left ear, and with a feeling as if the eyeball was being pushed forward. The next morning there was considerable proptosis, but never any ecchymosis. On convalescing after her confinement the patient appears to have preferred the attention of a herbalist to the more orthodox methods advised by Mr. Overton, so she passed out of observation until I was asked to see her on Sept. 16th, six weeks after her confinement. There was then marked exophthalmos, the swelling composed of the globe and the œdematous lids projecting considerably beyond the bridge of the nose and completely obliterating the orbital hollow. The cornea was covered by the œdematous upper lid, the lower lid was everted, and there was that transverse fold of conjunctiva arising from the bottom of the inferior conjunctival sac which is so prominent a feature in these cases. The eyeball was immovable and was directed downwards, forwards, and outwards, and there was a feeling of greater solidity at the inner and upper side. The cornea was clear and the pupils were equal in both eyes, and the left reacted to light and accommodation. The vision of the left eye was fair; she could tell the time by my watch, but when both eyes were used she saw doubly. On palpating the globe it gave the sensation of floating on a mass of œdematous tissue. No pulsation could be detected and no bruit could be heard, but she complained of a buzzing in the left ear, which had continued from the onset of the condition, and of considerable pain and distressing noises in the orbit and left side of the head. The thrill so characteristic of this state in other situations was never at any time detected. It is noteworthy that in both of Nelaton's cases of arterio-venous communication thrill was also absent.[1] I was unable to examine the fundus at this time, because retraction of the lid gave so much pain, and at a later period the turbidity of the media prevented it. The right fundus was quite natural. The jaws were full of foul and decayed teeth, the tongue was furred, and vomiting was a frequent and distressing symptom. The temperature and pulse were normal. The watch was heard at eight inches on the left side. The tumour continued to increase, and the pupil was noticed on the 24th to be dilated and immovable, and the lower margin of the cornea to show signs of ulceration.

Pulsation was first detected and rendered visible on the 29th by causing the fingers to press through the œdema till firmer structures were felt, and about this date a loud, continuous, blowing murmur, with marked accentuations synchronous with the pulse, could be heard all over the swelling and at the adjacent bony rim of the orbit, but not at other parts of the skull. On more than one occasion the bruit had a peculiar musical whistling sound superadded, but this was not a regular feature. The pulsation, the bruit, and the noises and buzzing in the head and ear could be at once stopped by pressure upon the left common carotid artery. In spite of the palliative treatment continued from the commencement—viz., rest, iodide of potassium, leeches to the temple, &c.—the patient grew steadily but slowly worse; the tumour increased, the sight diminished till all perception of light was lost, the patient lost flesh, and she was so wearied by the distressing noises and pain that she readily agreed to allow the carotid to be ligatured, after a consultation with my brother, Mr. Lawford Knaggs of Leeds, who agreed with me as to its desirability.

On Oct. 3rd I tied the left common carotid above the omohyoid muscle with chromic catgut, and Mr. Overton, who gave the anæsthetic, noticed the immediate arrest of pulsation and of the bruit, and a bluish discolouration of the tumour and pallor of the left side of the face. The discolouration had disappeared the next morning. Rapid recovery followed the operation, the wound healing by first intention. The only noticeable feature was the marked acceleration of the pulse, which before the operation was 72, but after it 120, and did not fall to normal for a week, though the wound healed by first intention and the temperature only once reached 99° F. The pain, noises in the head, buzzing in the ear, pulsation, bruit, and vomiting were at once removed; the proptosis gradually diminished, and the movements of the eye have partially returned, but the sight was completely gone, the disc was cupped, and the globe now presents the ordinary characteristics of a glaucomatous eye—viz, dilated and fixed pupil, increased tension, and enlarged episcleral veins. The lower part of the cornea is opaque from the healed ulceration, and now that the transverse fold of conjunctiva has been cut away the only deformity that remains is due to the corneal opacity and the restricted ocular movements.

Remarks.—It will probably always remain a matter of some uncertainty as to what was the actual condition in this case. The diagnosis seems to lie between true aneurysm, arterio-venous aneurysm, and thrombosis of the cavernous sinus. Certainly there is a well recognised tendency for venous thrombosis to occur in the lying-in woman, but it is noteworthy that in only one reported case in which this condition was subsequently found to exist was pulsation present.[2] A notable proportion of these cases of pulsating exophthalmos occur in pregnant women, either before, or after, or during delivery. The condition thus arising is regarded by some as idiopathic, yet there is probably in many cases a direct connexion between the powerful propulsive efforts of labour upon the endocranial circulation and the structural injury leading up to the diseased state originating the disease. According to Rivington the great majority of the idiopathic cases have been instances of endocranial arterio-venous communications due to rupture of an aneurysm into the cavernous sinus,[3] and the same authority states that five of the idiopathic arterio-venous cases occurred in pregnant women, another during the effort of childbirth, and another was attributed to an effort made in a confinement five years before. The musical bruit is a somewhat confusing element in the diagnosis, pointing rather to arterio-venous communication than to aneurysm; but it loses much of its force from being present for only a short period and completely disappearing before the operation, as though it arose from some accidental and temporary cause. Another feature in the case is the occurrence of glaucoma in the protruded eye. We know that by finger pressure upon the globe an artificial and temporary glaucomatous condition can be produced, and that the visual acuity rapidly fails, but returns directly the pressure is removed. It is not, therefore, surprising when an eye is forced from the orbit by the pressure of an increasing tumour behind it, and that the intra-ocular tension should be raised, especially if the tumour overlaps or partly surrounds the eyeball. Two forces are at work: one tending to keep the eye from being pushed forward—viz., the optic nerve, which anchors the eye to the base of the brain; the other the growth of the tumour, which expands in the direction of the least resistance and thus tends to force the eyeball forwards. The softness and adaptability of the tumour, and the extensibility of the optic

[1] Transactions of the Royal Medical and Chirurgical Society, vol. lviii., p. 239.

[2] MacEwen: Pyogenic Disease of the Brain and Spinal Cord, p. 251.

[3] Heath's Dictionary of Surgery, vol. ii., p. 126.

nerve, may modify this antagonism of forces, but pressure must be exerted on the globe. The wonder is not that glaucoma should result, but that it should occur so seldom in these cases. Mr. Hulke records one instance in which the eyeball was hard and prominent and the sight lost,[4] and Mr. Walker another in which glaucoma was present, and he attributes it to lateral pressure and not to longitudinal stretching of the optic nerve impeding venous return;[5] but these are the only cases in which this condition seems to have attracted attention. Irritation of the fifth nerve may perhaps also be a factor in inducing the glaucoma. According to Brailey,[6] this nerve controls the amount of secretion into the eyeball, and its irritation causes the tension to rise, whilst its paralysis is sometimes associated with a slackness of the globe. It requires no great stretch of the imagination to conceive that the altered conditions within the orbit may be adequate to produce such irritation; but the beneficial results of operative interference are very striking. Doubt still seems to exist in some minds as to the propriety of ligature in cases of arterio-venous aneurysm in this situation; but in this case no treatment was of any avail until ligature was adopted, and from that moment the pulsation ceased, and steady, continuous, and complete recovery set in. It is to me a matter of very great regret that this expedient was not adopted before the onset of glaucoma, for then there can be no doubt that the sight would have been preserved. Digital compression of the artery and coagulating injections have been tried in some cases with uncertain results, and at the best they seem to be more suited for hospital than for private practice. If such methods with rest fail to cure, no treatment short of ligature promises to be of any use, whereas the loss of sight in this instance, after the tumour had existed for some six or seven weeks, shows that delay has its dangers, which may be avoided by early resort to operation.

Huddersfield.

NON-TRAUMATIC SUBCUTANEOUS EMPHYSEMA.

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NOT a few cases of subcutaneous emphysema arising independently of external traumatic causes have from time to time been recorded. In the majority of these cases pneumothorax was present in addition, but in some the air occupied the subcutaneous tissues of the neck, face, and trunk only. This latter condition is described as arising from rupture of a pulmonary alveolus through the violent paroxysmal strain thrown on the lungs in whooping cough. Air escapes into the inter-alveolar tissue and passes through this to the root of the lung and the mediastinum. From the mediastinum it makes its way up the paths of the great vessels into the neck and then spreads over the face and chest. Simple subcutaneous emphysema has also been observed in laryngeal ulcer. In phthisis with adherent pleuræ a cough may cause rupture of the degenerated lung tissue. Localised pneumothorax frequently forms as a result of this, often without being recognised during life. Rarely air escapes into the subcutaneous tissues without entering the pleural cavity.

Through the kindness of Dr. Leech, into whose ward the patient was admitted, I have permission to publish the following case of emphysema, in which the air occupied the subcutaneous tissues and probably the mediastinum only. A youth aged seventeen was admitted to the Manchester Royal Infirmary on Jan. 18th of this year complaining of a slight cough and of swelling of the face and chest. The patient was quite well on Saturday, Jan. 13th. On Sunday morning (the 14th), on awakening, he felt a pain in the left mammary region, with a point of maximum intensity about one inch outside and below the nipple. It was sudden in its onset and was not preceded by any coughing. He said that the pain seemed to come from his back, was sharp, and took his breath. It continued in much the same condition until after dinner, when as he was indulging in his usual Sunday after-dinner lounge on the sofa he felt it become more severe, and his friends suddenly noticed that his right cheek was swollen. He now felt short of breath and wanted to cough badly, but owing to the severe pain under the nipple brought on by a cough he dared not do so. His left cheek was next observed to be swelling, and as the patient felt very ill a medical man was sent for. When the latter arrived the swelling of the face had greatly increased, the eyes being almost closed by it. Both sides of the front of the neck and chest were also affected. The patient was now suffering from great dyspnœa and distress. The surgeon made an incision about three-quarters of an inch long down the centre of the manubrium sterni, and the patient said they could hear the air escaping from the opening. He felt considerable relief, but the swelling did not decrease much, and he still felt very ill and short of breath. On Monday morning the swelling had subsided somewhat, and he felt better. On the next day the eyelids were worse again, but otherwise the improvement was maintained. From this time onwards the swelling gradually decreased. He came under our observation on Thursday, Jan. 18th.

Previous medical history.—The patient had always enjoyed good health. He was troubled with a slight cough for about fourteen days previous to his illness. Eight years ago he had an attack of acute pleurisy, which came on suddenly in the night. A medical man was called in and applied turpentine stupes to the seat of pain, which was under the left nipple. This attack only lasted for one night, and he was able to go to school in the morning. Since that time he had had no further pain, but had felt "weak" in the left side. At different periods of his life he had suffered from abscesses in various parts of the body—fourteen in all—which burst of their own accord. There was no history of hæmoptysis and no loss of weight. He said he had been subject to sweating at night for some months.

Family history.—His father died aged forty-eight, from bronchitis. He broke three bloodvessels at different times of his life. The mother died aged thirty-eight, from phthisis. Two brothers also had died from that disease. One broke a bloodvessel, and the other was ill for three months and coughed up a pint or more of yellow sputum each day. One brother and one sister were alive and well. He had always had a comfortable home, with plenty to eat.

Condition on admission on Jan. 18th.—He was a well-developed lad, but pale and anæmic. The cheeks and neck were rather swollen. The pulse was 72 and the respiration 18; both were regular and apparently normal. The glands in the neck were slightly enlarged. There were fourteen scars on various parts of the body, over the situations of the lymphatic tracts and glands; all of these were healed and healthy. There was a healing scar over a recent incision about three-quarters of an inch long over the manubrium sterni. On palpation very fine subcutaneous emphysematous crackling was felt anteriorly over both sides of the face, neck, and thorax, and on the right side of the abdomen to Poupart's ligament. On working the finger over the skin towards the scar on the sternum air could be heard escaping from it in fine, crisp crackles. There was no pain or discomfort of any kind in connexion with the emphysema. There was nothing abnormal in connexion with the digestive system. As to the circulatory system, owing to the crackling produced by the stethoscope, nothing definite could be made out. The heart sounds were apparently normal. Coming to the respiratory system, both sides of the chest moved well, but the expansion of the left was not quite so good as that of the right. There was no bulging or retraction. The patient complained of slight pain below the left nipple, which was increased on breathing or coughing. He had a slight cough, with very little sputum, which was frothy and mucoid, with no pus or blood. No tubercle bacilli were found. Examination of the lungs anteriorly with the stethoscope was impossible owing to the crackling under the skin. Posteriorly, the percussion note of the left apex was not quite as good as that over the right side. Both lungs were resonant elsewhere. Vocal fremitus and resonance were equal over both lungs. No abnormal auscultatory sounds could be heard anywhere. The nervous system was normal. The urine was of sp. gr. 1025 and contained no albumen or sugar. The patient was ordered low diet and to stay in bed and remain as quiet as possible. A sedative cough mixture was prescribed.

Progress of the case.—On Feb. 3rd the emphysema had gradually disappeared, and there was no trace of it remaining. He still complained of slight pain under the left nipple. The

[4] Transactions of the Medical and Chirurgical Society, vol. lviii., p. 268.
[5] THE LANCET, Jan. 27th, 1894.
[6] Heath's Dictionary of Surgery, vol. i., p. 597.

chest was carefully examined on that day, both anteriorly and posteriorly. The percussion note was good all over. Beyond slight feebleness of the breath sounds in the lower part of the left axillary region, nothing abnormal was found. As to the circulatory system, the cardiac impulse was diffused over the left third and fourth and fifth interspaces. There was a retraction of the third and fourth spaces synchronously with an elevation of the fifth space over the apex-beat. All were systolic in rhythm. There was no thrill and no epigastric pulsation. The apex was in the fifth interspace, just outside the vertical nipple line and four inches from the centre of the sternum. The upper limit of superficial cardiac dulness was at the level of the lower border of the third rib. The limit to the right was one inch to the right of the mid-sternal line. On auscultation at the apex the first sound was heard to be impure and of a low pitch. It was difficult to say whether it was reduplicated or whether a soft systolic murmur accompanied it; the second sound was accentuated. The sounds at the tricuspid region had similar characteristics. At the aortic cartilage there was a faint systolic murmur, the second sound being normal. The first sound was faint, but pure, at the pulmonary cartilage, and the second was accentuated. The rhythm of the heart was quite regular. On Feb. 28th there was no change in the condition of the patient. He still had a slight cough, with expectoration of small quantities of mucus. The pain in the left side still persisted, but no physical signs could be made out in connexion with it. He was quite convalescent for the last three weeks, but was kept in the hospital for observation. On March 8th he was sent to the Southport Convalescent Hospital.

Remarks.—From the history of the case and from the physical signs present whilst the patient was in hospital it will be seen that there was no evidence of pneumothorax on either side and that the air occupied the subcutaneous tissues of the trunk, neck, and face only. The interesting question is, How did the air escape into its abnormal position in the absence of external injury? There are three ways in which this could happen: (1) by rupture of a normal pulmonary vesicle, described as occurring in whooping-cough; (2) by rupture of a vesicle adherent to the parietal pleura; and (3) by ulceration through a bronchus of a suppurating mediastinal gland. The first explanation is out of the question entirely, there having been no severe attacks of coughing. More is to be said in favour of the second. A very definite symptom throughout the whole course of the illness was pain under the left nipple, increased by deep inspiration or by coughing, but I could never hear a pleuritic rub or any other adventitious sound over this area. Taking into account the outward displacement of the apex-beat of the heart, the absence of pleuritic friction, the history of a previous attack in this same area eight years previously, the impaired movement of the left half of the chest, and the diminished breath sounds over the painful area, the conclusion presents itself to one's mind that there is some adhesion, and probably retraction, of the pleuræ at this point. It is quite possible for the leak to have arisen here in consequence of a severe cough. To my mind, however, the third is the most likely explanation. There is a marked family history of phthisis, and the boy is probably of a tuberculous diathesis. The succession of abscesses in various parts of the body points to this conclusion and is also presumptive evidence of there having been a suppurating gland in the mediastinum, which worked its way through the wall into the lumen of a bronchus. The escape of pus into the bronchus would set up a cough at once, and air would then be forced into the mediastinal tissues. Every successive cough would increase the amount extravasated. I could gather no history of purulent sputum with which to support this idea. All that the boy noticed about the sputum was that it was frothy. The perforation, once formed, seems to have healed up rapidly after the first day or so, and the air in the subcutaneous tissues was absorbed gradually without there being any sign of irritation from its presence.

GLANDERS.—At the instance of the London County Council, a cab proprietor was summoned at the Westminster Police Court, on the 28th ult., to answer to the charge of neglecting to give notice of having a glandered horse in his possession. The evidence given in support of the prosecution was sufficient, in the opinion of the magistrate, to establish the validity of the charge, and the defendant was fined £25 and 5 guineas costs, or two months' imprisonment—a heavy penalty, but one only commensurate with the gravity of the offence.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON THE USE OF SULPHUR IN SURGERY.

BY W. ARBUTHNOT LANE, M.S., F.R.C.S. ENG.,
ASSISTANT SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN.

IN 1893[1] I published a short paper entitled "How far is Sulphur likely to be of Service to the Surgeon?" and in it I described the two first cases of very extensive tuberculous disease of the hip and elbow joints, in which it was used with the most satisfactory results, since both recovered rapidly and perfectly under this treatment. The conclusions I summarised in that paper are as follow: (1) sulphur applied locally appears to exert no deleterious effect on the health of the individual; (2) it gives rise to products which are powerfully caustic in their action. Therefore it must be used in small quantities and with discretion; (3) it destroys all organisms whether free in a space or growing in the surrounding tissues; (4) it acts much more powerfully upon recently incised structures than upon granulating surfaces; (5) its action is rendered more uniform and general and less violent by mixing it with glycerine; and (6) if used in any quantity, the drug must be removed within a day or two and irrigation subsequently adopted. Since writing that paper I have used sulphur very largely, not only in tuberculous conditions, but in other infective processes, and with the most satisfactory results. The rule I adopt in the treatment of extensive tuberculous disease with much destruction of bone is, if there is a well-defined cavity in the bone, to pack it with iodoform in the manner described in a previous paper,[2] but if there be no such suitable space, and if it be impossible to remove with certainty all tuberculous material, I place an emulsion of glycerine and sulphur in the cavity for twenty-four hours and then irrigate daily for a time with dilute perchloride of mercury lotion or with a sterile normal saline solution. In the case of recent foul wounds with extensive laceration and bruising, its action is perhaps seen to best advantage. The following notes of such a case illustrate this very well.

A man aged thirty was admitted into Guy's Hospital under my care on Feb. 11th of this year. He had been cleaning a window, when he fell forty feet. His forearm was transfixed on a spike of the area railings, and he was suspended upon it. The skin and muscles of the forearm were extensively lacerated along the whole of its length, and portions of his coat, which was very dirty, were embedded amongst the pulped muscles. Such portions of the muscles as were very much mashed and dirtied were removed. The ulnar artery was uninjured. The damage to the soft parts was so extensive, and the fouling so considerable, that I believed that, however thoroughly the parts were washed with germicidal lotions alone, amputation would become necessary at no distant date. Therefore, after cutting away some parts, cleaning up others, and removing any foreign materials present, gauze, saturated with an emulsion of sulphur and glycerine, was introduced everywhere in and between the lacerated tissues. At the end of twenty-four hours this was removed, when the wound was found to smell strongly of sulphuretted hydrogen, and the tissues were covered with a soft black slough. Irrigation with dilute perchloride of mercury solution was used daily, and the intervals in and between the lacerated muscles packed with cyanide gauze. The slough soon separated, leaving a healthy granulating surface. The highest temperature recorded was 100·6° F. in the evening following the operation.

I have little or no doubt in my own mind that such a result could not have been obtained by the germicides in general use. In the case of lupus no application, in my experience, is so perfectly satisfactory in its results as sulphur, whether employed in its most active form as the powder, or more gradually, in the form of an emulsion or an ointment. In every case in which I have used it, cure has rapidly resulted, with practically no destruction of tissue other

[1] Medical Week, Dec. 8th.

[2] One of the Best Applications of Iodoform in Surgery, THE LANCET, July 15th, 1893

than lupoid. In the case of cancerous or sarcomatous ulceration, the destruction of the soft parts can be regulated and determined very accurately. Unlike the escharotics in common use, it has practically no effect on healthy cutaneous or mucous surfaces, but requires the action of a granulating or raw surface to determine the formation of sulphurous and sulphuric acids, which are apparently the agents which influence the vitality of the organisms and tissues with which they come in contact. I have also found sulphur most useful in the foul ulcerative stomatitis which is so common among the children of the poor, and which resists so obstinately such local treatment as is usually adopted. In such cases, if gauze or wool be dusted abundantly with the finely powdered drug, and this be retained in firm contact with the foul ulcerated surface for an hour or two, sufficient destruction results to clear the surface of its infective organisms, and it then heals rapidly. Should one application not produce a sufficient result, a second or even more may be required, the number depending on the extent and locality of the ulceration, the facility with which the plug can be retained in position, &c. Also in the foul impetiginous ulcers in children, the application of sulphur is similarly most effectual in the destruction of the micro-organisms producing these conditions. I might multiply very largely similar examples of the good results that may be obtained by the action of sulphur used in this manner, but I think that I have given enough to induce other surgeons to give it a good trial. Sulphur, like iodoform, becomes active as a germicide, and is very considerably more powerful in its action than iodoform only when in immediate contact with a raw surface, the living tissues causing it to form certain combinations with hydrogen and oxygen.[1]

St. Thomas's-street, S. E.

HYDATID OF LIVER; OPERATION; RECOVERY.

By ROBERT JONES, F.R.C.S. EDIN.,
HONORARY SURGEON, ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

THE patient, a woman aged twenty-one, was sent to me by Dr. Evans of Festiniog through Dr. Carter, who had diagnosed hydatid of liver. I first saw her on May 8th, 1893. She then gave the following history. About six months previously she noticed a swelling below the lower border of the ribs on the right side. It caused no pain or inconvenience, and seemed to her about the size of a hen's egg. The tumour developed rapidly, but she was able to go on with her work, paying but little attention to it. She took her food well, and up to five weeks before my examination of her she was in absolutely good health and suffered no local disturbance. She then had rheumatic fever, from which she made a rapid recovery. Her family history was good. It should be noted that three dogs were kept where she was a servant, two of them living in the house.

On examination the patient looked healthy, with rosy cheeks and bright eyes. The abdominal swelling was dull on percussion, and extended about four inches in every direction, taking its centre to the left of the right hypochondrium. It was uniform in contour and moved up and down during respiration, the skin not being affected beyond being tense. The mass conveyed a thrill to the hand on palpation, but was non-pulsatile and no bruit could be heard on auscultation.

I transferred her for operation into the Royal Southern Hospital. An incision was made on May 17th in the middle line of the abdomen about three inches in length, from about one inch and a half below the ensiform cartilage. All bleeding was stopped and the peritoneum was opened to the extent of about one inch. The tumour presented itself at the wound, could be moved freely, and had formed no adhesions. It was found to have occupied the liver. Some of the contents, which were of the usual hydatid character, were removed by aspiration. An incision, about three-quarters of an inch, was then made into the cyst and the finger introduced for the dual purpose of preventing leakage into the abdomen and of introducing the cyst wall into the abdominal wound. One hundred and twenty ounces of fluid then escaped, and even then the cavity was not emptied. The incision into the cyst was then enlarged and attached to the abdominal parieties by a double set of sutures, the inner set being composed of a continuous stitch and serving to fix the hepatic incision to the parietal peritoneum. By the guidance of the finger placed within the cyst a few outside interrupted sutures were so placed as not to perforate the whole thickness of the cyst wall, these serving both to lessen the drag upon the abdominal wound and to extend the area of opposed peritoneum. The stitching being completed large portions of the cyst wall were removed by forceps, and the cavity well washed out by quantities of mild warm boracic lotion. A large-sized drainage-tube was inserted and the wound was dressed in the usual way. With the exception of an occasional elevation of temperature the subsequent progress of the case was in every way satisfactory. The cavity was regularly washed out, and for some four or five months continued to discharge, and for the first six weeks portions of the cyst wall were found in the dressings.

On Sept. 2nd the patient was discharged, cured.

Liverpool.

[1] Dr. Ray-Pailhade, from experiments on the action of sulphur in yeast &c., concluded that there exists in living tissues a substance which he calls philothion, which can combine with sulphur. Particulars as to his experiments will be found in his Recherches Experimentales sur le Philothion.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

A CASE OF LOCALISED SUPPURATIVE PERITONITIS WITH GASEOUS DECOMPOSITION.

(Under the care of Mr. MCCARTHY.)

THIS is an example of an acute form of abdominal abscess to which the term "tympanitic" is sometimes applied. The operation did not throw any light on the causation of the disease, and that must remain obscure, especially as the vermiform appendix could not be felt. We occasionally meet with somewhat similar cases in younger people in which the appendix is also probably the cause of the trouble, but which close satisfactorily, and nothing further occurs to help in the diagnosis. The other cases mentioned by Mr. MacCarthy render the series of considerable interest.

In December, 1893, Mr. McCarthy was requested to see a man who had been admitted on the medical side of the London Hospital three days previously with abdominal trouble. The patient, a man aged thirty-two, with an excellent family and personal history, had been suddenly seized with severe abdominal pain followed by vomiting. For this he was admitted into the hospital. His bowels acted with purgatives and enemata, but the pain and vomiting persisted. The vomited matters consisted of food and bile-stained fluid. His temperature was normal. When seen by Mr. McCarthy he was in great pain and writhed about in bed, so as to render examination difficult. When he was induced to lie still for a few seconds the appearance of the abdomen was remarkable. Above the umbilicus the abdomen was slightly retracted, and below the umbilicus it was distended, especially in the centre, which from the umbilicus to the symphysis pubis presented an ovoid prominence, such as would be caused by a greatly distended bladder. Percussion was impossible, as the slightest touch caused great pain, but the appearance and history of the patient suggested localised suppuration, with gaseous decomposition. The patient having assented to an operation if it should be thought requisite was anæsthetised. The percussion note over the central prominence was then found to be very tympanitic. A catheter was passed but the bladder was empty. The abdomen having been shaved and washed with carbolic lotion (1 in 20) a vertical incision for about two inches was made through the skin in the middle line midway between the umbilicus and symphysis pubis. This was carried down layer by layer until the peritoneum was exposed. When this was punctured a quantity of fetid gas escaped. When the opening was enlarged about a pint of putrid pus

came away. Mr. McCarthy especially explored with his finger the right iliac fossa, so as if possible to ascertain the condition of the vermiform appendix, but it could not be felt. The bowels had been pressed upwards and to the side so as to leave a large cavity, which had smooth walls and extended into the true pelvis as far as the finger could reach. No further exploration was made from fear of breaking down adhesions and generalising the peritonitis. The cavity was copiously irrigated with warm boracic lotion, a large rubber drainage-tube was inserted, and the wound was sutured and dressed antiseptically. The next day the patient was very comfortable; the pain and vomiting had ceased and he had slept well. For the first two days the discharge through the drainage-tube had a putrid odour notwithstanding daily irrigation with boracic lotions. On the third day after irrigation about two drachms of iodoform emulsion were injected and the putridity ceased. For the first week the temperature varied from 99° to 101° F., and then became normal. The patient's recovery was rapid and uninterrupted, and by the middle of January, 1894, he was practically cured, but was kept under observation for another month and then discharged, with directions to return at once if any untoward symptom should occur.

In commenting on this case Mr. McCarthy mentioned a very similar one which had some years before been under the care of Mr. Couper. The following particulars have been extracted from the Hospital Register and are published with Mr. Couper's permission. In December, 1886, a man aged forty-eight was admitted with intense abdominal pain, vomiting, and diarrhœa. He stated that he had been losing flesh for two years, but could give no explanation of the cause of his then condition. As he did not improve, Mr. McCarthy saw him in consultation with Messrs. Couper and Tay on Dec. 23rd. He was in a state of extreme prostration. At the lower part of the abdomen there was an ovoid prominence simulating a distended bladder and very tympanitic on percussion. Localised suppuration with gaseous decomposition was diagnosed. The patient was anæsthetised and the abdomen opened in the middle line. A quantity of gas and putrid pus escaped. Convalescence was tedious, and the temperature charts indicate that the patient was in a hectic condition for several weeks, but he ultimately recovered, and was discharged cured on May 5th, 1887.

A third and somewhat similar case was mentioned which occurred in private practice. In May, 1877, a man aged seventy was under the care of the late Mr. Coward of Bromley-by-Bow for what was diagnosed as typhoid fever. The chief symptoms were abdominal pain, vomiting, and diarrhœa. The late Dr. Sutton, being consulted, thought a surgical opinion desirable. On May 22nd Mr. McCarthy saw the patient in consultation with Dr. Sutton and Mr. Coward. The patient seemed to be dying. His face was livid, his tongue dry and brown, and his pulse scarcely perceptible. The abdomen was uniformly distended; but in the right hypochondrium the skin was livid and œdematous, and over a limited area the percussion note was very tympanitic. As the patient's condition prevented any anæsthetic being employed a scalpel was thrust in as in opening an ordinary abscess. Gas and about ten ounces of very fetid pus came away. By digital exploration a large cavity was found with irregular projections on its median wall, but no abdominal viscus could be recognised. The cavity was washed out with warm water, and ordinary dressings were applied. No special antiseptics were used. The next day the patient was much better, and pain and vomiting had ceased. The cavity was washed out with warm very dilute Condy's fluid, and during the process two small bodies floated up, which proved to be grape pips. The patient then stated that for several weeks before his illness he had eaten large quantities of grapes daily. His recovery was rapid, but a sinus persisted for several weeks. On Aug. 27th he called on Mr. McCarthy, and the wound was then soundly healed. He stated that twenty-seven more grape pips had come away from time to time in the discharge. In this case Mr. McCarthy thought that the suppuration was extra-peritoneal. He conjectured that the grape pips had accumulated in the vermiform appendix, and that this, having become adherent to the parietal peritoneum, had ulcerated through into the subperitoneal tissue. The resulting suppuration had pointed upwards, possibly guided by the peristaltic contraction of the ascending colon. In the other cases the suppuration was certainly intra-peritoneal, but there was nothing to indicate the exciting cause.

HULL ROYAL INFIRMARY.

COMPLETE ATRESIA VAGINÆ (ACQUIRED).

(Under the care of Mr. HENRY THOMPSON.)

THE usual cause for such a condition as that described in this case is difficult labour followed by irregular sloughing of part of the vaginal wall. In the absence of a history of unusual difficulty during any of the confinements which occurred before the one during which the occlusion was first noticed it is difficult to assign the cause with any certainty; it is not, however, improbable that it may have been the result of syphilitic infection, for the husband is stated to have suffered severely from the disease. The other causes for acquired atresia are excluded. There is no account of injury from a foreign body or cauterisation, and none of gangrene from infectious disease, of lupus of the vagina, of suppuration in the true pelvis, or of vaginitis. The occlusion was complete, leading to retention of menstrual fluid and rendering operation imperative. Dr. Skene writes of operation in acquired atresia vaginæ: "The difficulty in the operation and ultimate success depend upon whether the atresia is partial or complete. If the portion of the vagina which is closed is limited to one-third of the whole canal, reasonable hopes of success may be entertained, but I doubt if the vagina was ever fully restored and maintained when complete atresia existed." Schantz has described two cases in which he was compelled to perform Porro's operation for pregnancy complicated by atresia vaginæ. The treatment after operation of these cases is very troublesome. For the notes of this case we are indebted to Mr. Sutcliffe, house surgeon.

A woman thirty-one years of age was admitted into the Hull Royal Infirmary on Sept. 9th, 1893. The patient was a married woman and has had five children. The first four of these were born without difficulty, the first being stillborn, but the other four living and healthy. Nothing abnormal was noticed until she was in labour with the fifth child, when the medical attendant, Mr. Baron, found that the vagina was occluded by cicatrisation. Whilst under chloroform a powerful labour pain came and drove the child through the occluded passage, tearing open the adhesions. Nothing further was done, and the woman nursed the child for sixteen months, at which age it died from bronchitis. Shortly after the death of the child the woman went through all the subjective symptoms of a menstrual period, but there was no escape of fluid. She was accordingly examined by Mr. Baron, who sent her under the care of Mr. Thompson at the Hull Royal Infirmary. So far as could be made out there was no history of injury, but the husband was known to have had severe syphilis. In spite of the condition described below, regular sexual intercourse had taken place up to the time of admission to the hospital. On admission, the patient was a stout, well-developed woman. Vaginal examination revealed a complete occlusion by cicatrices up to within an inch of the external orifice. Per rectum a fluctuating swelling could be felt occupying the vagina above the atresia. The abdomen was rather distended, but the fundus uteri could not be distinctly made out above the pubes. On introducing one finger into the rectum and another into the remains of the vagina the two opposing surfaces could be felt to glide over one another; accordingly, under ether an incision was made at this point, and a large quantity of black treacly fluid escaped. The incision was extended in various directions, the vagina stretched so as to admit three fingers, and then the vagina and uterus were well washed out with hot solution of perchloride of mercury (1 in 5000). After the fluid had been all washed away examination showed that the os uteri and neck had apparently disappeared, and that the upper part of the vagina and the whole of the uterus formed one huge cavity. The douching being finished, the vagina was lightly plugged with iodoform gauze and an external antiseptic pad and T bandage applied. The patient never had a bad symptom, and she menstruated naturally on Sept. 20th. On examination on the 23rd the vagina was found to be reclosing; the cicatrices were accordingly again freely divided, and the vagina was stretched and plugged. On the 28th a Barnes' dilating bag was given to the patient with instructions to use it regularly, and she was discharged.

Remarks by Mr. THOMPSON.—Such complete acquired atresia I personally never saw before. I could find no aperture that would admit even a probe. The woman herself was utterly unconscious that anything was or had been the

matter with her vagina until the difficulties connected with the birth of the fifth child occurred. What was the exact cause I do not know. It seems incredible that sloughing sufficient to cause such a condition should take place and yet the woman not be aware of it. She was by nature a dull, apathetic countrywoman, and probably not easily alive to personal inconvenience. No other signs of syphilis were found, nor could any history of it be obtained from the woman herself.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Abdominal Section for Acute Intestinal Obstruction by Band.

AN ordinary meeting of this society was held on April 2nd, the President, Sir WILLIAM DALBY, being in the chair.

Mr. H. PERCY DEAN and Mr. HUTCHINSON, jun., communicated a paper on a case of Abdominal Section for Acute Intestinal Obstruction by Band, with a record of a case in which it was successfully performed twice on the same subject. The patient was a young man aged twenty, in good health until four days previously to admission to the London Hospital on Dec. 23rd, 1892. He was then seized with symptoms of acute intestinal obstruction. Mr. Dean operated on the day of admission, and found a tight fibrous band constricting a loop of small intestine. This band gave way, and was excised as far as possible. The peritoneal cavity was cleansed, and the wound secured by sutures traversing the whole thickness of the abdominal wall. The patient recovered, and remained well until September, 1893, when he was again seized with acute obstruction, and was operated on by Mr. Hutchinson, jun., within a few hours, without waiting to try large enemata or abdominal massage. The incision on this occasion was made through the left linea semilunaris. This was fortunate, because extensive adhesions between the small intestine and the scar were seen to be present, which would infallibly have led to the gut being opened had the incision been made through the site of the first incision. The strangulated loop was eight inches in length, greatly distended, and purple in colour, constricted by a tight narrow cord-like band which was connected with the intestine adherent to the linea alba. The adhesions were carefully separated and then only could the constricting band be thoroughly exposed and cut through. It was remarkable how suddenly the congested intestine returned to its normal colour. The peritoneum was brought together over the raw surface by a continuous suture in order to lessen the risk of adhesions to the scar, and the cut edges of the left rectus were united with buried silk and catgut sutures. No difficulty was experienced in returning the intestine. The operation took about an hour and the patient was not collapsed. An evacuation was obtained at the end of the third day by means of an enema, the wound healed by first intention, and the patient, who left the hospital at the end of three weeks, had remained well ever since. Success under these circumstances ought to encourage surgeons to early operative interference in these cases. The statistics compiled from the cases published in the medical journals were useless, because as a rule only successful cases were given. Curtis gave a percentage of recoveries in a series of 328 cases of acute intestinal obstruction of 31 per cent., of 97 cases due to bands or diverticula recovery followed operation in 41 per cent. The diagnosis was clear in the case related. It was very doubtful whether enemata or abdominal massage would have been of use, for considerable force would have been required to rupture the thin cord-like band. Although only fifteen hours after the onset of the symptoms, the constricted portion of intestine was already greatly distended and deep purple in colour. In a few hours the gut would undoubtedly have lost its contractile power. It was a noteworthy fact that the constricting band was closely connected by adhesions with the old scar, and this confirmed the view of the importance of separately suturing the peritoneum.

Dr. PASTEUR and Mr. BLAND SUTTON then communicated the case of a married woman aged twenty-three, whose illness dated from her last confinement in June, 1893. A month later she was laid up with an attack of perimetritis lasting about a week. On Sept. 6th acute abdominal symptoms supervened, with distension, great tenderness, and some vomiting. When she was admitted to the Middlesex Hospital on Sept. 27th there had been total obstruction for four days. The face was pinched and anxious, the abdomen much distended with visible coils of small intestine, occasional hiccough, and a little stercoraceous vomiting. The pulse was rapid, small, and of low tension. A morphine hypodermic injection was given and the stomach thoroughly washed out. Mr. Sutton operated the same evening. After opening the peritoneum in the middle line below the umbilicus a loop of intestine presented, which was surrounded, but not constricted, by an inflammatory band. This was ligatured in two places and divided. Immediately beneath this some collapsed gut was seen, and on raising a distended loop of intestine a tightly constricting band was exposed to view. This was similarly ligatured and divided, and immediately the contents of the distended gut were seen to flow freely into the collapsed portion of intestine. No other bands could be discovered. The patient was in a state of dangerous collapse for some time after the operation, and could not be moved from the operating table for more than an hour. Her recovery was seriously endangered on the fourth day after the operation by an attack of acute lobar pneumonia, which commenced quite suddenly and involved both pulmonary bases. The crisis occurred on the ninth day. From that time she made a rapid recovery. The authors attributed the patient's recovery to the early resort to surgical interference and to the accessible situation of the constricting band. They were unable to offer any opinion on the nature of the pneumonia, but were not inclined to attribute to it any causal relation with the abdominal trouble.

Mr. LOCKWOOD remarked that Mr. Hutchinson had laid great stress on the manner in which the abdominal wound was closed. When the incision was in the linea alba he saw no reason to put a triple layer of sutures in the abdominal wall; he held that there was no danger in suturing the peritoneum at the same time, if care were taken not to include too much of it. But when the incision was made in other regions—as, for instance, in the loin or in the linea semilunaris—it was more desirable to suture layer by layer, for if not the peritoneum tended to fall away and the muscles would gape unless fastened with the buried suture. In the second case which had been related there was advantage in using a single layer of buried sutures in face of the profound shock which was present. For suture nothing was better than well-soaked fishing gut, including but little of the peritoneum and little of the skin, but a good bulk of the intermediate structures. He held that the linea alba was the proper place for an incision in an exploratory operation. Success in the first case seemed to have been a great deal due to early operation, while peristalsis was still active, and before the abdomen had become distended. The early passage of flatus after abdominal operations he regarded as an especially favourable sign. He believed that there was less risk in a properly conducted abdominal section than in abdominal massage in these cases.

Mr. STEPHEN PAGET asked what were the advantages of fishing gut over silk.

Mr. DENT said that success in these cases depended on a good many factors at present not well understood. In strangulated hernia the results were scarcely better than they used to be, although they were now operated on much earlier. But in cases of intestinal obstruction by band the results were vastly better now than formerly. Rapidity of operation was most important, hot flushing should be employed to ward off collapse, the incision should if possible be planned to avoid any intestinal adhesion, and care should be taken to keep the exposed intestines warm. The method of suture he thought was unimportant, but the peritoneum should be carefully sewn up on account of the possibility of the supervention of extreme distension afterwards.

Mr. C. E. JENNINGS said that the only case he had operated on was successful. It was an exploratory operation, and he broke down numerous bands, binding down chiefly the large intestine. Ten days later a recurrence of the symptoms led him to perform a right lumbar colotomy, and this was followed by recovery.

Mr. BLAND SUTTON said that the whole subject was still obscure. These patients died poisoned, and often very quickly, and the cause of this remained to be discovered by pathological chemists. The exploratory incision he preferred to make in the middle line between the umbilicus and pubes, which brought one straight to the small intestine, and both

the sigmoid region and the pelvis could be easily reached. It was important to operate as quickly as possible, consistently with safety, to reduce to a minimum the amount of manipulation of the gut, and he preferred to suture straight through all the layers at once. Hernia did not depend upon the method of suture, for it might come on as late as eighteen years after the operation. With regard to the abdominal wound, there was no part of the body other than the face which would heal so readily by primary union.

Mr. HUTCHINSON, jun., in reply, held still that it was better to sew up the peritoneum by continuous suture and to suture the rest of the tissues with silkworm gut, which did not take much longer, and saved the surgeon from accidents, such as nipping of a knuckle of the small intestine between the sutures, and prolapse of the gut into the wound if a stitch should have to be removed on account of tension. There was less risk of ventral hernia afterwards and less risk of future adhesions, which, as Mr. Mayo Robson had shown, might cause many distressing symptoms. It had been suggested that an artificial anus should be made in the distended gut above, but further experience was required before this could be recommended. Among his own cases he had not seen a single instance in which he had regretted operating or in which massage could have reduced the obstruction. He did not find that cases of strangulated hernia came under treatment earlier now than they used to do. He was convinced of the value of early operation in these cases of obstruction by band and the recent results were most encouraging.

CLINICAL SOCIETY OF LONDON.

Rectangular Ankylosis of Hip-joint treated by Operation.—Resection of Part of Left Lateral Wall and Base of Bladder for Recurrent Epithelioma.—Cholecystotomy.—Traumatic Rupture of Bile-duct.—Aneurysm by Anastomosis.

AN ordinary meeting of this society was held on March 30th, the President, Mr. HULKE, being in the chair.

Mr. CHRISTOPHER HEATH communicated notes of two cases of Rectangular Ankylosis of the Hip-joint treated by Operation. The first was in a girl aged fourteen, with complete osseous ankylosis of the hip at a right angle, but with no sinuses and no dislocation. Division of the neck of the femur by Adams's method was performed, but considerable difficulty was encountered in overcoming the contracted condition of the muscles. Eventually an excellent straight limb was obtained. The second patient, a girl aged nineteen, had dislocation of the head of the femur, with sinuses leading down to the bone. Division of the femur between the trochanters (Sayre's operation) was performed with complete success. Photographs of the patients before and after the operation were shown, and the patients were exhibited.—Mr. BOWLBY said the question was, What was the best operation for ankylosis of the hip following on tuberculous disease? and he held that the procedure of Mr. Adams was not the most suitable one, though it might be best in cases following an injury or rheumatism. His objections to Adams's method were (1) that the saw cut, passing through the area which had been diseased, might open up a focus of tuberculous deposit and give rise to a fresh lighting up of the disease; (2) that there might be much formation of new bone round the neck of the femur, making its section difficult; and (3) that there often was no neck of femur on which to operate. He advocated division of the femur below the lesser trochanter, and he put up the limb in the abducted position, so that there should be a tilting of the pelvis downwards on that side when the lower limbs were brought parallel to each other.—Mr. KEETLEY said that in a case such as that first related, where the position after the operation was something approaching to a rectangular ankylosis, it was hopeless to expect a really good result without removing a wedge of bone and, at the same time, dividing the soft parts exceedingly freely. The fear of a bad result following cutting into parts previously affected with disease was groundless. He had operated on about thirty cases in adults or in adolescents approaching to adult age, and in all but one he obtained rapid healing without trouble. They were all instances of strumous disease.—The PRESIDENT remarked on the importance, in the early treatment of these cases, of keeping the limb in such an attitude that, if ankylosis supervened, it would remain useful to the patient.

Mr. HURRY FENWICK related a case in which he had Resected a Portion of the Left Lateral Wall and Base of the Bladder for Recurrent Epithelioma. The man had been under the care of Dr. Mackenzie of Caerphilly. The symptoms were typical of villous growth of the bladder, but electric cystoscopy revealed a small, tough epithelioma of the left base. Mr. Fenwick removed this through the perineum in May, 1891, and Mr. Targett reported that the tumour, microscopically, was a malignant epithelial growth. Symptoms recurred in a year's time. Supra-pubic cystotomy was therefore performed and the tumour thoroughly removed, the base being seared with Paquelin's cautery. Seven months afterwards the symptoms again recurred. The tumour and the left lateral wall and base of the bladder, upon which it was placed, were completely resected supra-pubically. The usual vertical incision being extended laterally through the left lower abdominal wall, the wound healed *per primam*. The patient now, nine months after the operation, was able to hold his urine from four to seven hours, and had gained in weight. Mr. Fenwick advised resection only when the epithelioma was primary, tough, single, and small, when the submucous tissues were found glued to the base of the growth, and only in those cases where the *vis* of the patient warranted so severe an operation. He believed that separation of the symphysis pubis would be but rarely needed.—The PRESIDENT, while congratulating Mr. Fenwick on the admirable result attained, alluded to the difficulty of cutting wide of a malignant growth in a viscus such as the bladder.—Mr. PEARCE GOULD asked whether any difficulty was encountered in bringing the edges of the vesical wound together, whether any leakage occurred into the cellular tissue beside the bladder, and how far the attachment of the peritoneum had to be stripped up before the section of the bladder-wall was made. He likewise inquired whether Mr. Fenwick had removed any malignant growths situated in the upper part of the bladder and involving the peritoneum.—Mr. W. G. SPENCER asked why a drainage-tube was left in the bladder if there was no urethral obstruction and the urine was healthy.—Mr. HURRY FENWICK, in reply, said that in children primary union of the cut vesical wall might be expected, but not in the adult; hence he preferred to leave in a drainage-tube. Where a carcinoma of the bladder involved the peritoneum it was best left alone. The edges of the wound in the bladder-wall came easily together, there was no leakage, and he raised the peritoneum until it reached a level corresponding to the posterior reflection when the viscus was distended.

Mr. ARBUTHNOT LANE read the notes of a case in which there were large stones in the common bile-duct, producing complete obstruction. Fæcal matter was found in the duct, and operation was followed by recovery. The patient was a woman aged thirty-five, who, one year and ten months ago, had her first attack of biliary colic; since that time she had attacks at frequent intervals, they being more severe and the intervals shorter as time went on. At an early period the jaundice remained after the attacks had passed off, and for many months before her admission her motions had been white and pasty. She lost flesh and strength very rapidly. She was attended by Mr. Chubb of Sandgate from October, 1893, and during that time her temperature was high in the evening, and during her attacks of abdominal pain, tenderness, distension, and increased jaundice it was very regular. She was admitted to hospital on Dec. 11th, 1893, in a very wasted and prostrate condition, an exacerbation or attack having just developed. Her abdomen was very distended, tender, and painful, especially between the edges of the liver and umbilicus. The edge of the liver could be detected on her sitting up, and the gall-bladder could not be felt. During the six days following her admission the temperature was so irregular as to suggest the presence of pylephlebitis; but after that, the so-called attack subsiding, the temperature became regular, rising every night to 103° F. or more. On Dec. 21st, by means of a long vertical incision, Mr. Lane found the gall-bladder to be flaccid and containing some mucus and three small stones, which yielded a strong fecal odour. There was a stone fixed in the cystic duct, and several large ones in the common bile duct, two being behind and also below the level of the first piece of the duodenum. A small incision was made into the common duct, when a large quantity of clear mucus of a strong fecal odour was gradually allowed to escape and was carefully removed. On attempting to get at the calculi a free escape of what was apparently fluid fæces took place

from the opening in the duct. The incision into the duct was carefully sutured, a tampon of iodoform gauze was introduced into the peritoneal cavity, and through its centre a glass tube was placed with its orifice close to that in the duct. The stone in the cystic duct was not removed, as it was hoped that it would prevent the exit of bile by the gall-bladder, which it served to do effectually. The patient was much improved by the escape of the dammed-up mucus. On the 24th the tampon was found to be saturated with bile of a fecal odour. It was removed and replaced, the bile subsequently escaping through the glass tube. On Jan. 3rd the opening in the duct was enlarged sufficiently to allow of the introduction of the finger when the stones were broken up, and a large quantity of débris and fluid of a stercoraceous character was evacuated. It appeared as if one of the stones projected into the second piece of the duodenum. After a few days the urine lost its tinge of bile, the fæces regained their normal colour, the opening in the abdominal wall closed, except where the gall-bladder opened, and from it mucus continued to escape. The patient rapidly gained health and strength. Mr. Lane called attention to the peculiar character of the so-called attacks and pointed out the remarkable simplification of such operations by the use of the gauze tampon. Although normal bile had no deleterious influence on the peritoneum, the secretions of the liver, as the surgeon met them in cases in which he was obliged to open the common hepatic and common bile ducts, probably always contained organisms capable of setting up a fatal peritonitis.—Mr. PEARCE GOULD asked Mr. Lane whether he actually passed his finger into the duodenum. He likewise inquired whether the odour was truly fæcal or like that of the normal duodenal contents. He suggested that the smell might have been that of the pancreatic juice.—The PRESIDENT referred to the harmlessness of healthy bile when it escaped into the peritoneum, and its effect in this respect was to a certain extent similar to that of healthy urine. He himself had never found fecal matter in the bile-duct.—Mr. ARBUTHNOT LANE, in reply, said that the odour encountered was precisely like that of the contents of the large gut. He could not quite pass his finger into the duodenum.

Mr. BATTLE contributed notes of a case of Traumatic Rupture of the Bile-duct. A boy aged six was admitted to the Royal Free Hospital on Aug. 15th, 1893, having been run over by a hansom cab. There was but slight shock, and no bruising of the abdomen or special tenderness. He vomited soon after admission. The case was regarded as one of contusion of the abdomen. On the third day the urine was noticed to be high-coloured, and the temperature was 101·2° F. in the evening. He vomited occasionally and was restless. On the fourth day respiration was spasmodic and entirely thoracic. The bowels were acting and he had vomited. The temperature at 6 P.M. was 102·3°. On the fifth day he was still restless and looking ill. Slight jaundice was present. On account of the vomiting nutrient enemata were commenced. On the sixth day there was slight dulness in the right side of the abdomen, the vomiting was more troublesome, and the temperature normal. On the seventh day he was much worse, looking very ill, with sunken eyes, deeply jaundiced, and much emaciated, frequently vomiting in the manner of those suffering from peritonitis; the pulse was rapid, and he lay on his back, with flexed thighs. The condition of the abdomen was one of flaccid distension; it moved with respiration, but chiefly in the upper part, and was but slightly tender and without muscular rigidity. Dulness extended from the hepatic region into the right iliac fossa; there was also slight dulness in the left flank; this dulness extended forward as far as the linea semilunaris and changed but slowly, if at all, with the position of the patient, who was restless and peevish and gave an occasional deep sighing inspiration. Mr. Battle, who saw the case for the second time on this day, expressed his opinion that the fluid in the peritoneal cavity was bile, probably mixed with some inflammatory effusion, and that the supply was through some small opening in the duct apparatus and not due to rupture of the gall-bladder or liver substance. He proposed abdominal section, but was not able to do this until twenty-four hours later, when the condition of the child was much graver. At the operation an incision was made in the right linea semilunaris, and a good deal of almost pure bile was evacuated, more than three ounces being collected. The weak state of the patient prevented any prolonged examination, and nothing abnormal could be felt with the finger. The coils of intestine were congested. He died on the morning of the ninth day. At the post-mortem examination made by Mr. W. H. Evans the whole of the intestines were found to be injected and to have thin layers of lymph on them; this was especially marked on the right side. The liver and gall-bladder were intact, but about half an inch beyond the junction of the cystic and hepatic ducts the common bile-duct was found to be torn transversely completely through, but the aperture was difficult to find. No other traces of injury were found. Bile was absent from the motions during the last two days of life only. Mr. Battle pointed out the usual course of symptoms in this class of cases—viz., the history of a severe injury, followed by some shock and few definite abdominal signs until some days had elapsed, and then the appearance of fluid in the abdomen, only cured by repeated tappings. This was the only case he could find of complete transverse rupture of the duct without laceration of the liver. He referred to known cases, in some of which, at the necropsy, partial rupture was proved to have taken place, to others in which, after similar symptoms, recovery had ensued, and to still others in which, although the conditions locally after death and the general symptoms during life were similar to those of the first group, yet no communication with the ducts was proved.

Mr. G. R. TURNER communicated notes of a case of Aneurysm by Anastomosis, said to be congenital, which occupied the right temporal region of a girl aged sixteen, and which had been increasing in size, extending to the right eyelid and cheek. The skin covering the tumour was thin and discoloured, giving it a nævus-looking appearance. Examination under an anæsthetic showed the tumour to have grooved the bones, but to have no intra-cranial communication. Several dilated thin-coated vessels were exposed in the normal situation of the temporal artery and ligatured. Pressure was made on the growth and was followed for a time by marked improvement. Pulsation ceased, and the bruit and thrill disappeared—to reappear, however, in a few weeks' time. Various vessels at the outer canthus and in the frontal region which appeared to feed the growth were then ligatured, and pressure was again employed. These proceedings were followed by temporary improvement only. The girl returned home, and although there had lately been some further extension of the swelling her parents refused any further treatment. Mr. Turner remarked that, according to Gosselin's classification, this was a case of aneurysm by anastomosis rather than arterial varix or cirsoid arterial varix. From the capillaries and skin being implicated, excision of the mass was impossible, and had he obtained permission from the parents he would have ligatured the external carotid artery. He did not think that surgeons of the present day should be deterred by statistics of a past age, before the introduction of antiseptics and the use of absorbable ligatures, from ligaturing either this vessel or indeed the common carotid artery in such cases as the one recorded. He drew attention to the frequency of the temporal region as the affected side and mentioned a case he had seen occupying the whole of one side of the scalp.—Mr. W. G. SPENCER advocated ligature of the vessels which could be felt, and then the application of electrolysis—if necessary, in several sittings. If that failed, excision could be practised, followed by skin-grafting of the denuded area.

PROVINCIAL MEDICAL SOCIETIES.

CATHOLIC UNIVERSITY MEDICAL SOCIETY.—A meeting of this society was held on March 12th, Dr. ROCHE, Vice-President, being in the chair.—Amongst some morbid specimens Dr. MCWEENEY exhibited the Viscera of an elderly woman who had been a patient under the care of Dr. Redmond in the Mater Misericordiæ Hospital, and in whom there was found post mortem an enormous gastric ulcer about five inches in circumference which had destroyed the wall of the stomach, the left lobe of the liver being laid bare in front, while the pancreas behind the ulceration had apparently been stationary, death being immediately due to œdema of the lungs consequent upon atrophic and fatty heart. The other conditions found at the necropsy were universally adherent pericardium, pulmonary tuberculosis with cavities in both apices, and large white kidney. Dr. McWeeney remarked on the causation of gastric ulcer, and Dr. REDMOND gave a short account of the clinical history of the case.—Dr. JOYCE showed an Aneurysm of the Abdominal Aorta

occurring in the case of a man who had been under treatment four years previously in the Whitworth Hospital. He then complained of persistent constipation and great pain in the abdomen. For a long time it was believed the trouble arose from scybala in the colon, but a bruit was heard and an aneurysm diagnosed, which ultimately ruptured. At the necropsy the heart was normal, the aneurysm pressing against the colon, thus accounting for the pain and constipation.—Mr. ROUGHAN read a paper on Supra-pubic Cystotomy. On Feb. 3rd Mr. McArdle performed this operation, removing two projecting lips of prostatic tissue and a ridge which projected into the bladder in front of a sac which had contained a large encysted stone. The hæmorrhage was successfully treated by tamponning with iodoform gauze. The bladder was drained by a tube adopted by the operator at the suggestion of Professor Bermingham.—Dr. MCWEENEY then read a paper on a case of Leukæmia, for permission to study which he was indebted to Dr. Boyd, in whose ward it was under treatment in the Mater Misericordiæ Hospital. The patient was a middle aged man and the disease was of the spleno-medullary type. When first examined the relation between the red blood discs and the white cells was about eight to one, but under treatment the proportion had improved to one in twenty. Neutrophile granulations were abundantly present, and nucleated red blood cells were to be found in each field; but he had been unable to demonstrate satisfactorily Ehrlich's groups of granulations. The significance of the various morphological changes in this disease was discussed, and allusion was made to the metachromatism displayed by the nuclei of the nucleated red blood-corpuscles as compared with those of the leucocytes.

LIVERPOOL MEDICAL INSTITUTION.—A meeting was held on March 29th, Mr. CHAUNCY PUZEY, President, in the chair. The following resolution was proposed by Dr. STEEVES, seconded by Dr. CARTER, and carried unanimously: "That the members of the Liverpool Medical Institution, fully recognising the great importance of an efficient registration for plumbers, are of opinion that such registration should, without delay, be placed on a firm legal basis by Act of Parliament." This resolution was to be sent as a memorial to the President of the Local Government Board, Sir Walter Foster, M.P., and Mr. Lees Knowles, M.P.—Dr. STEEVES said that this resolution was a sequel to one which he had brought forward in 1888, which was to the effect that an organised and efficient system of registration should be put in force in Liverpool and the district, and since this time much good work had been accomplished by means of district councils and registration centres throughout the United Kingdom.—Mr. ROBERT JONES then related a case of Intestinal Obstruction of twelve days' duration on which he had successfully operated. The obstruction was caused by a band about three-quarters of an inch broad, which pressed on and completely occluded the ileum. The strand was severed, and fæcal vomiting, which had been constant up to the operation, quite ceased, and the patient rapidly convalesced.—Mr. JONES also related a case of Hydatid of the Liver, which he incised and stitched by a double row of sutures to the abdominal wall. He removed 120 ounces of fluid. The patient recovered.—Dr. ARCHER followed by reading notes of a case of Idiopathic Tetanus occurring in a telegraph boy aged fifteen. He presented himself one evening apparently suffering from acute tonsillitis. Salicylate of sodium was prescribed, and the boy was told to send word should he not improve in a couple of days. Two evenings later a hurried message was sent to say that the patient was choking. He was found to be in a state of great prostration, with difficulty in swallowing fluids. There was no trismus or opisthotonos. Death occurred four hours later. No history of any wound or injury could be obtained. Dr. GLYNN referred to cases where the specific poison of tetanus appeared to have been introduced through very slight abrasions. Dr. BRADSHAW was struck by the rapidly fatal termination of Dr. Archer's case, the difficulty in swallowing, and the absence of trismus.—Dr. ALEXANDER described the case of a boiler-maker aged fifty-two, who was struck by a heavy plank across the loins. Three days later he was admitted in great pain and with retention of urine. Two pints of very bloody urine were drawn off with a catheter; the next day a catheter was tied in the bladder, which was washed out night and morning with a solution of hamamelis until all trace of blood had disappeared. All went on well for nearly a month, when he was again seized with great pain and retention of urine. A silver catheter was passed, but no urine came through; the bladder was greatly distended; perineal section was performed and a large tube introduced into the bladder, but still only a small quantity of fluid came away. Two days later the withdrawal of the tube was followed by the extrusion of what looked like a piece of roughened mucous membrane, and which proved to be an entire cast of the interior of the bladder. After this had come away all difficulty was at an end, and the man progressed favourably.—Dr. HOPE read a paper on Insanitary Property and Artisans' Dwellings. The property specifically dealt with consisted of three-roomed, back-to-back and side-to-side houses, arranged in closely congested courts and with most defective sanitary appliances. Many of these courts were erected prior to 1847 and were in a ruinous state. The construction of back-to-back property was not put a stop to until 1864. From that year measures had been in gradual progress for dealing with the existing evil. A large insanitary area was pulled down under Cross's Act, and the Victoria Buildings were erected on the site and opened in 1883. Since 1884 2860 houses of the type described had been pulled down, but the entire amount expended by the Corporation in this work of demolishment since 1864 was upwards of £265,000. The death-rate in the areas which had been cleared had for a series of years ranged between 40 and 60 per 1000, whereas in the new cottages or blocks the mortality during the last three years had approximated only to 22 per 1000. Dr. Hope expressed an opinion in favour of cottages rather than the large blocks of four- or five-storey dwellings. Dr. STEEVES said that in the Toxteth Park sanitary district there was very little congested property. Dr. CRAIGMILE said that not many years ago there was much insanitary property in Seacombe, but during the last ten years most of this had been done away with, and almost entirely at the cost of the owners. Drs. A. DAVIDSON, GEORGE TAYLOR, and other speakers took part in a most interesting discussion.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on March 21st, when the following matters came up for consideration, the President, Professor DIXON MANN, M.D., being in the chair.—Mr. J. E. PLATT read a communication based upon observations on seventy-six cases of Fistula in Ano, sixty-eight occurring in males and eight in females. Sixty-three of the patients were between the ages of twenty and fifty. In 28·7 per cent. the condition was associated with tuberculosis of the lungs, and five or six others gave a family history of phthisis. The special characteristics of fistula in phthisical patients were described, and attention was called to certain points which were apt to be overlooked during the operation and the after-treatment. Observations were made of the length of time necessary after operation for the complete healing of the wound, and it was computed that the average time in tuberculous patients was a little over nine weeks, whilst in thirty-seven non-phthisical patients rather more than seven weeks only was required. The question of the advisability of operation in the phthisical was freely discussed. In phthisical cases it was found that, with one exception, the health improved and remained good for a considerable time after operation. Attention was drawn to the great mental distress frequently caused by fistula in phthisical subjects, and the unfavourable influence which this anxiety has upon the progress of the disease. The opinion was expressed that the range of cases suitable for operation was much wider than was usually supposed.—Mr. STANMORE BISHOP showed a case of Hygroma of the Neck. The cyst was multilocular in character and contained serous fluid. The child, aged three years and rather delicate, had the cyst situated in the right posterior triangle.—Mr. STANMORE BISHOP showed also a specimen of Rectal Carcinoma, removed from the rectum by anterior incision.—Dr. ALFRED BROWN mentioned a case of a man aged forty-eight, in whom, during an attack of acute rheumatism, acute œdema of the larynx occurred.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on Wednesday, March 28th, Mr. A. H. EVANS, the President, being in the chair.—Mr. F. MARSH showed a young woman aged twenty-six, from whose thyroid gland he had three weeks previously enucleated a cyst the size of a small hen's egg. She had had some parenchymatous enlargement of the thyroid gland for two years, which under treatment had almost disappeared, but a cyst had developed in the right lobe and was slowly increasing in size. There were no pressure symptoms. No difficulty was experienced at the time of operation; there was no hæmorrhage to speak of,

although the cyst over a small area on its deeper aspect was incorporated with gland structure. The scar was hardly noticeable, as the wound had healed by primary union, and the line of incision was parallel to the anterior margin of the sterno-mastoid.—Mr. GEORGE HEATON showed a boy aged twelve, the subject of Otitis Media Purulenta, who whilst under observation had had symptoms pointing to rupture of an intra-cranial abscess into the right tympanum.—Mr. E. LUKE FREER read a paper consisting of notes on the scope of Orthopædics in the Treatment of Deformities and the Relation to Surgery. He insisted on André's original derivation of the word from ὀρθος, straight, and παιδευω, I train, as the basis of the true principles of orthopædy. He divided deformities into three classes—(1) primarily—orthopædic, as non-carietic spinal deformities, talipes, and other contractions, knock-knee, bow leg, &c.; (2) secondarily—orthopædic, as morbus coxæ, spondylitis, and other carietic deformities, as well as paralytic and cicatricial deformities; (3) anorthopædic, or deformities not applicable for treatment by orthopædic principles, as cleft palate, hypospadias, epispadias, herniæ, and other tumours. He dwelt on the necessity for definite, regulated, and continuous kinetics, with correction of postural habits in scoliosis; on the daily manipulations and removable retentive apparatus after tenotomy, as opposed to plaster and wrenching, reserving in talipes tarsectomy for a small percentage of relapsed cases; on early physiological rest and, later, light kinetics in carietic diseases; on massage with kinetics in paralysis; and on applied mechanics, followed by small plastic operations, as opposed to early operative interference in cicatricial deformities. He showed a number of cases and photographs illustrative of the principles advanced, and also tenotomes and other instruments used.—Dr. J. BIGGAM read a short paper on Poisoning by Carbonic Acid Gas, with two fatal cases.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society on March 21st, the President, Dr. HUNTER, being in the chair, Mr. CHICKEN showed a tumour the size of a hen's egg that he had removed from the thyroid gland of a young woman. In discussing the treatment of thyroid enlargements in general he recommended, where pressure symptoms existed, either excision of a portion of the gland or division of the isthmus. This latter proceeding, he remarked, in some cases caused the growth to diminish in size.—Mr. ANDERSON delivered an address on the Surgical Treatment of Prostatic Enlargements. After some preliminary remarks dealing with the pathology and morbid anatomy of this affection, he described the symptoms and the methods of physical diagnosis—viz., examination per rectum and by catheterisation. He divided the treatment into that necessary before the commencement of catheter life and that subsequently. With reference to operative treatment he described prostatotomy and perineal prostatectomy, but preferred and advocated supra-pubic prostatectomy. He further detailed the results of six cases in which he had operated and removed by the supra-pubic method prostatic tumours.—In the discussion which followed the PRESIDENT and Messrs. J. WHITE, CHICKEN, PRYCE, and TRESIDDER took part, and Mr. ANDERSON replied.—Dr. MICHIE read notes of two cases on which he had successfully operated. 1. Cholecystotomy for Gallstones. In this case on the day after the operation he found that the peritoneal cavity contained a considerable amount of bile. This complication he treated with success by inserting a glass drainage-tube through a small incision above the pubes into Douglas's pouch. 2. Ovariotomy during Labour.

PLYMOUTH MEDICAL SOCIETY.—At a meeting held on Saturday, March 31st, Dr. HINGSTON in the chair, Mr. LUCY (Hon. Sec.) read a paper on Tuberculous Arthritis, its Nature and Treatment. After defining this affection as inflammation caused by the presence of tuberculous tissue in the structures composing an articulation, Mr. Lucy described the histological characters of tubercle and tuberculous infiltration, and gave reasons for considering as tuberculous all those types of joint disease known clinically as strumous. Microscopic preparations of tuberculous tissue were exhibited. The life-history of tubercle was gone into fully, and the morbid anatomy of the changes met with in bone, cartilage, and synovial membrane was described. Stress was laid on the occurrence of chronic abscesses in the bursæ and tissues around a joint due to inflammation of bone in the near neighbourhood, a lesion which required accurate diagnosis to prevent opening the joint on the supposition that the disease was within the cavity. These abscesses were defined as tuberculous tumours with fluid centres and should be treated as such by complete extirpation. Mr. Lucy considered the majority of cases of tuberculous arthritis to be primarily osseous and in this connexion held that in persons infected with tubercle a bruise of bone in the vicinity of a joint led to an osseous lesion, while sprains and strains led to acute synovitis with subsequent synovial thickening. Arguing from the analogy of so-called "acute necrosis" (a misnomer), where special micrococci were found at the point injured, the commencement of tuberculous lesions by a deposit of the virus from the blood stream in the part whose vitality was lowered by traumatism was upheld. Coming to treatment, it was divided into the expectant form, or measures in which the skin was not incised, and the operative form, where the converse happened. These were further subdivided in the case of children and of adults, taking the age of puberty as a convenient boundary. The various indications for either form were fully discussed, and also the varieties of each. The value of Thomas's splints was urged, as well as the desirability of prolonged expectancy in children with good family history, especially in the better classes. As to operative measures, the first essential of which was strict asepsis, Mr. Lucy maintained that the days of set excision or complete arthrectomy were numbered, being replaced by the more thorough erasion or "partial arthrectomy" (partial in the sense that only diseased portions and not the whole of the articulating surfaces were removed). The use of the "bloodless method" of operating was condemned on the grounds that considerable oozing of blood occurred at the seat of operation after the dressings were applied, forming a nidus in which bacilli could multiply in the case of antisepsis failing, and, moreover, permanent injury to the limb often occurred from the pressure of the elastic cord, which was necessarily severe from the prolonged nature of such operations. In the case of hip-joint operations attention was called to the necessity of hunting for the "blow-hole" of a sequestrum in the femoral neck before incising the joint proper. Two cases were shown in illustration of the points brought out.—Mr. ROW exhibited a specimen of Acute Yellow Atrophy of the Liver.—At the conclusion of the meeting it was announced that the centenary of the society would be celebrated on April 11th by a dinner at Matthews' Restaurant, Plymouth.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Sequel of a Case of Myxœdema treated by Thyroid Juice.—Treatment of Bright's Disease.

A MEETING of this section was held on March 2nd, Dr. W. G. SMITH, President, being in the chair.

Dr. LITTLE gave an account of the subsequent progress of a case of Myxœdema which had been treated successfully by the hypodermic injection of Thyroid Juice, and the notes of which he had communicated to the Academy in April last.—Dr. A. PATON mentioned the case of an old woman who suffered from the disease, and whom he treated with ten minim doses of the extract of the thyroid gland three times a day. The swelling diminished very much, and though her expression was still heavy and drowsy, there had been no return of the intumescence.—Dr. HAWTREY BENSON said that last April he narrated the history of a case of myxœdema cured by the internal administration of thyroid juice. His patient, who was still in perfect health, had taken small doses of the extract continuously since he had seen her. He thought that it was well always to begin the treatment of these cases by the internal administration of the juice, and if after a fair trial this method did not prove efficacious to resort to the hypodermic method.—The PRESIDENT remarked that it was interesting that it did not seem to matter much whether the juice was given by the mouth or under the skin. If it owed its activity to some body belonging to the class of nucleo-albumen it would be imagined that gastric digestion would have some influence on its action.—Dr. LITTLE, in reply, stated that some evidence existed as to harm being sometimes done by these extracts. He had himself noticed some rather alarming symptoms in two patients of his own, one of whom became very nervous and

hysterical, and necessitated some nurses being engaged to watch her. In the other case the patient after a few days developed violent headache and pain in her abdomen, and similar symptoms came on after a fresh trial.

Mr. MICHAEL F. COX submitted a report of two cases of Acute Bright's Disease which he had successfully treated, commenting at the same time on the generally unsatisfactory results obtained in the treatment of the affection. The first case was that of a man aged forty-seven years who, from exposure to wetting and excessive indulgence in alcohol, suddenly developed symptoms of acute Bright's disease, complicated with uræmic convulsions, maniacal excitement, coma, and amaurosis, and who, chiefly by free purgation and copious leeching, ultimately recovered perfectly. The other case was attended by oliguria and a great amount of albuminuria and extensive anasarca. Improvement being tardy under ordinary treatment the patient was put on fifteen-grain doses of diuretin three times a day, with the result that the urine, which was reduced to one pint a day, was doubled every succeeding day until it nearly reached sixteen pints in five days, maintaining its specific gravity, whilst the albumen and dropsy entirely disappeared, and the patient was soon quite well.—The PRESIDENT said it was not an uncommon experience for patients to recover from uræmic convulsions and to live an active life for many years. Many years ago he had a case of a servant who lay for three days comatose, recovered, and returned to her work. Several years afterwards she had a similar attack, recovered, and was still at work. The relation between the amount of dropsy present and the quantity of urine passed was not simply a mechanical one. In some cases there were very little urine and very little dropsy; in others much dropsy and a large quantity of urine, and some recent experiments of Heidenhain tended to show that there was some peculiar connexion between the cells of the tissues and a flow of lymph. With regard to diuretin he had not been favourably impressed by it. Chronic nephritis he believed to be scarcely, if ever, cured.—Dr. JAMES LITTLE said that he had tried diuretin in a case of ascites from contracted liver, and had not found it of use. With regard to the hot-air bath in the treatment of cases of nephritis, the testimony of patients had been that they were less comfortable. In only two cases had he seen a hot-air bath do good.—Mr. COX replied.

SECTION OF OBSTETRICS.

Removal of Ovaries and Tubes for Dysmenorrhœa.—Uterine Myomata treated by Injection of Ergot.—Ovariotomy on a Lunatic.

A meeting of this section was held on March 9th, Dr. PUREFOY, President, being in the chair.

Dr. ALFRED SMITH showed Tubes and Ovaries removed from a patient aged thirty-five, who had for months suffered intensely during the menstrual periods. She was curetted on several occasions without benefit and dosed with the usual remedies recommended for dysmenorrhœa without the slightest improvement. The uterus felt very large and nodular, as if studded with small myomata. The tubes and ovaries were all adherent and hard to palpate. Nothing could be done except to arrest the menstrual periods. Accordingly, on Feb. 22nd the tubes and ovaries were removed. The patient suffered great pain after the operation, on the third day after which an attack of pseudo-ileus supervened; this was relieved by a turpentine enema. Her recovery was rapid and uneventful.—Dr. ATTHILL said that there were some severe cases of dysmenorrhœa which justified removal of the ovaries. In a case in which he had performed the operation the patient was compelled to spend three weeks out of four in bed. She was now quite well.

The PRESIDENT detailed some cases of Uterine Myoma for the removal of which Injections of Ergot were effectual in two cases. In only one case was there trouble from sloughing of the tumour. In one the hæmorrhage was not checked, and removal of the ovaries effected a cure.—Dr. SMITH said that at the present day, when so much was heard of operative gynæcology, it was useful in some cases to adopt less dangerous methods. A certain number of cases could be benefited by the hypodermic injection of ergot, but his own experience of the remedy was unfavourable.—Dr. ATTHILL gave his testimony to the same effect. He had found local abscesses, which caused considerable trouble, to follow his injections.—The PRESIDENT, in reply, stated that this treatment was useful for that class of patients who were scared by the very mention of the word operation, and also in those cases in which the fibroid was intra-mural and not projecting into the cavity of the uterus in a polypoid form, or existing as a pedunculated subperitoneal fibroid.

Dr. LOMBE ATTHILL detailed the particulars of a case in which he watched the growth of a Uterine Fibroid from nearly its earliest stage, till it attained the size of the fœtal head at full term, its growth being attended by profuse, sometimes alarming, hæmorrhage. About two years and a half ago the patient became insane and was admitted into an asylum, shortly after which menstruation ceased to recur. Recently her attendant observed her size to increase rapidly, and Dr. Atthill being requested to see her diagnosed a large ovarian cyst. Ovariotomy was performed by him, and the opportunity was taken of examining the condition of the uterus. It was found to have atrophied to such an extent that it was but little larger than the healthy organ should be previously to the occurrence of the climacteric period. This rapid atrophy was doubtless accelerated by abstinence; specially during the first month of insanity she was with difficulty induced to take any food. Although she could not be prevented from sitting up in bed frequently, even on the day on which the operation had been performed, she made a rapid recovery, the temperature only once rising to 100° F.; that was on the day succeeding the operation. She was stated to be in her fiftieth year.—Dr. SMITH remarked that it was a very early age for a uterine fibroid to disappear. Usually the climacteric period was delayed. He knew that Dr. Savage had performed several ovariotomies on lunatics, but without satisfactory results as regarded their mental condition.—Dr. ATTHILL, in reply, stated that the operation was done merely to prolong the patient's life. He did not expect any improvement in her mental state.

Reviews and Notices of Books.

A Treatise on Hygiene and Public Health. Edited by THOMAS STEVENSON, M.D., F.R.C.P., and SHIRLEY F. MURPHY, M.R.C.S. Vol. II. London: J. and A. Churchill. 1893.

[FIFTH NOTICE.]

DR. ASHBY tells us that a county medical officer of health should have had large and varied experience of health appointments. The same may be said with equal truth of the writer to whom is entrusted the responsibility for the preparation of the article upon the Medical Officer of Health in the above standard work. This is the task which Dr. Ashby has undertaken, and the advantage derived from his thorough knowledge of sanitary administration in both urban and rural areas is evident throughout. Beginning with a short account of the growth of the office, from its tentative origin at Liverpool in 1847 and in London in 1848 down to the present time, he passes on to consider the conditions of county, urban, and rural appointments, and gives excellent advice with regard to errors into which inexperienced officers are apt to fall; especially he insists that the health officer should make no parade of politics, that he should take no part in newspaper controversies even in defence of his own department, and that he should be careful not to encroach upon the province of the clerk, the surveyor, or the engineer. Later he is warned not to assume the functions of the sanitary inspector, although he must be fully conversant with all the details of his subordinate's work, nor must he allow the sanitary authority or the public to impose upon him the duties of the analyst, even in regard to water samples, unless he is duly appointed and paid in that capacity. Still later, in reviewing the Notification Act, it is made clear that it is no part of his duty, and except under rare conditions not even within his right, to examine patients or to review diagnoses notified to him by his professional brethren, unless of course by their consent or wish; but while making a firm stand against indiscreet zeal Dr. Ashby aims at a high degree of efficiency. He explains how information should be accumulated, how notes should

be taken, how records should be kept, and how sanitary work should be pressed forward persistently but cautiously, with a plentiful covering of velvet over an unmistakably iron hand. The more important branches of the work which falls to the lot of the medical officer of health are separately considered in some detail. The methods of house inspection and the questions involved in reporting upon unhealthy areas or unhealthy dwellings are dealt with in a suggestive way which will prove very helpful. As regards access of light the author quotes with approval the standard in force in Liverpool and contemplated in London, requiring that no building be erected upon a site in such a way as to rise above an imaginary line drawn from the back boundary of the curtilage at an angle of 45° with the horizon. Another subject which is treated at considerable length is that of hospitals for infectious disease. Dr. Ashby accepts the conclusion, based upon the experience of the Local Government Board, that small-pox is liable to aerial diffusion from wards in which cases are congregated, and advises that where practicable secluded sites should be obtained. The different Acts and Orders under which sanitary work has to be carried on are conveniently summarised, so far as is necessary in order to make clear the extent of the health officer's powers and duties and the means of carrying them into effect. The best advice which could be given to a newly appointed medical officer of health would be to study Dr. Ashby's article, in which he will find almost every part of his work explained, with many valuable hints upon practical and ethical points. After a careful reading, and verification of most of the references, we are unable to point to a single oversight of any moment in the course of ninety instructive pages.

Manual of Bacteriology for Practitioners and Students, with especial reference to Practical Methods. By Dr. S. L. SCHENK, Professor Extraordinary in the University of Vienna. Translated from the German by the Author's permission. With an Appendix by W. R. DAWSON, B.A., M.D., University Dublin, late University Travelling Prizeman in Medicine. With 100 Illustrations, partly coloured. London and New York: Longmans, Green, & Co. 1893.

WE are sometimes inclined to think that the number of text-books is becoming too great, and that both student and teacher will ere long find it a difficult matter to determine which one of the many bearing on individual subjects is best suited for their respective purposes. For the teacher, fortunately—or perhaps unfortunately one should say—this has up to the present not become a very formidable difficulty as so few text-books conform or come up to his special requirements and because also so many of them are unsatisfactory, either as regards matter or arrangement, that he can never recommend them to his students. In the case of the student, however, whose knowledge of any subject has still to be acquired, the difficulty of choosing a really good text-book from amongst those offered to him is already one that cannot be lightly ignored. Amongst this latter class must be reckoned those older students who are engaged in bacteriological investigation in the intervals of leisure snatched from a busy practice. For their information we should like to draw special attention to Professor Schenk's "Manual of Bacteriology," translated by Dr. Dawson.

The scope of the work may be gathered from the fact that in it are treated: First, the general morphology and biology of micro-organisms, after which are taken in turn the methods of sterilisation and incubation, the methods of making plate cultures, and the apparatus required in carrying on the separation, cultivation, and examination of various micro-organisms. Then follow special chapters on the bacteriological analysis of air, of water, of earth, and of putrefying substances, of articles of diet, of pus, of the organisms in the skin, in the alimentary tract in the fæces and urine, in the respiratory tract, and in the blood. These, with a number of notes by both author and translator, constitute the main body of the work; and they are certainly the most valuable part, as here will be found in succinct, lucid, and systematic form the ground-work prepared for any special bacteriological investigation. Within the pages of a book of this size it is of course impossible that the physiological and biological problems involved in the study of bacteriology can always be satisfactorily treated; but the main points are so well, though briefly, indicated that anyone working carefully through the preliminary chapters and then attending to the details given in any one of the special chapters in which he is interested will find it an easy matter to commence and carry on his investigation to a successful issue. In an appendix by the translator the more recent results of researches on inoculation against cholera, on parasitic protozoa, and on the action of light on micro-organisms are briefly summarised, whilst a number of additional methods, especially those most in favour in this country, are given at the end of the appendix. Altogether we congratulate, not only Dr. Dawson, but those workers who require a systematic introduction to bacteriology, on the admirable translation of Professor Schenk's work that is now within the reach of the English reading public. The work is exceedingly well printed, and the drawings, both naked-eye and microscopic, are well done and accurately reproduced. The method of introducing coloured illustrations into the text has, in several instances, been attended with considerable success.

Beitrag zur Klinik der Aktinomykose. Von Dr. ALBERTO ILLICH, Operateur an der I. Chirurgischen Klinik des Hofrathes Prof. Dr. Albert in Wien. Mit 2 Lichtdrucktafeln. Wien: Verlag von Josef Safár. (*Contribution to the Clinics of Actinomycosis.* By Dr. ALBERTO ILLICH, Operator at the Surgical Clinic of Court Councillor Professor Dr. Albert, Vienna. With two Photogravures. Vienna: Publishing Office of Josef Safár.) 1893.

IN his work on actinomycosis Dr. Illich indicates that he wishes to give a *résumé* of the cases that have occurred in the clinic of Professor Albert of Vienna, and at the same time to give a short synopsis of as many other recorded cases of actinomycosis in the human subject as have been published, especially since the thirty-seven recorded by Israel in 1885. He says, indeed, that he looks upon this brief history of the literature of the subject as the chief object of the paper, although he cannot claim to have made the list absolutely complete. It may be stated that the list appears to be so full and accurate that very few cases can have escaped his attention. This paper is specially interesting in view of the recent results obtained by the use of iodide of potassium, and it would be interesting to note the method of treatment in the cases that have been recorded, as Dr. Illich is in perfect agreement with Schlange and others who have come to the conclusion that actinomycosis is a disease which ultimately, if not readily, yields to careful treatment. Altogether 421 cases are cited and epitomised.

The author divides his subject according to the parts affected: head and neck, tongue, lung, abdomen, skin, and "doubtful." He then gives a chapter on Therapeutics, in which he apparently gives the first place to incision, scraping, and the injection of antiseptic solutions. In scraping he objects to any part of the bone being touched, but appears to think that a simple incision followed by scraping is in all cases sufficient where the process is superficial. In fact, in most cases he looks upon the injection of sublimate solution or other antiseptic as being of secondary importance. In all cases, especially where the tongue is involved, a complete removal of all granulations offers the surest guarantee of complete healing. Where the viscera are affected the most drastic treatment can be of little avail, and it is in such cases

as these that the iodide of potassium treatment, if as successful as is claimed by Thomassen and others, will be of special value. Madura foot and pseudo-actinomycosis are briefly treated, and then a list of the titles of 569 articles on the subject of actinomycosis concludes the work, which is certainly one of the most complete of its kind that has yet been placed into the hands of the physician.

System of Diseases of the Ear, Nose, and Throat. Edited by CHARLES H. BURNETT, A.M., M.D. Two vols., pp. 1650, illustrated. London: H. K. Lewis. 1893.

THE tendency to associate diseases of the ear, nose, and throat, and comprise the accounts of each in one book, is evidently increasing, both on the Continent and in America.

The two large volumes before us are indubitably a valuable addition to the library of the specialist, though we greatly doubt whether the system of a number of writers collaborating to produce a book on one department of medicine is exactly what is most helpful to the student or general practitioner. The tendency of the arrangement appears to us to savour of discrediting the value of authority, the absence of which is the great quarrel which we have with the majority of text-books. In the book in question, for instance, we find one article on Hypertrophic Rhinitis by Dr. Seiss of Philadelphia, another on Cirrhotic Rhinitis by Dr. J. N. Mackenzie of Baltimore, and one on Inflammatory Neoplasmata of the Nose, by Dr. Seiler. Now, as each of these sections treats of affections due to inflammatory processes, they would have been more scientifically treated by one and the same hand, and we can hardly refrain from criticising the tenacity with which Dr. Mackenzie holds to his views that cirrhotic rhinitis is a later stage of the hypertrophic disease, when, as is generally admitted, the former is met with chiefly in very young women who are anæmic and have wide and turned-up noses, while the hypertrophic disease affects chiefly men who are not necessarily anæmic, but who for the most part present narrow, prominent noses, especially of the Hebrew type. Dr. John N. Mackenzie is a great scholar and a charming writer, but we cannot consider him an accurate observer.

Most of the authors are American, and it is doubtless beneficial to have the views of so many illustrious men collected in two volumes; but as a system we cannot but consider the work a failure. In the part devoted to the Ear Sir William Dalby contributes an article on Foreign Bodies and Osseous Growths in the External Auditory Canal, and Dr. Jack gives us an interesting account from his own experience of removal of the stapes. The articles on the Larynx are particularly good. Dr. W. C. Glasgow of St. Louis contributes an interesting article on Idiopathic Membranous Croup.

The two volumes are handsomely produced, the illustrations being profuse and well executed; but, as usual, the chromo-lithographic plates leave much to be desired.

Pain, Pleasure, and Æsthetics; an Essay concerning the Psychology of Pain and Pleasure with special reference to Æsthetics. By HENRY RUTGERS MARSHALL, M.A. London and New York: Macmillan and Co. 1894.

THIS work purports to be the result of many years of study and reflection on the part of the author on the psychology of pleasure and its correlated pain. An outline of some of the arguments has already appeared in *Mind*, but the present volume is substantially new and aims at giving the author's views in a complete and systematised form. The field covered by the author is, in his opinion, "sadly in need of illumination," and we must give him the credit of a courageous and elaborate attempt to grapple with some of the most abstruse problems in psychology. The problem of the work is to analyse the nature of pleasure and pain with special reference to æsthetics. In the author's opinion "pleasure and pain are qualities of the most general nature, either one of which may, and one of which must, belong to each psychic element which is differentiated." He holds that "if we make our examination in the region of the sensations, which are relatively simple and fixable to such a degree that the shifting of pleasure-pain field during the examination is avoidable, then we may properly look for the application or modification of the laws there discovered in other regions of mind which are less defined." His view of æsthetics is indicated by the following proposition: "That object is to be considered beautiful which produces a psychosis that is permanently pleasurable in revival. Each pleasure may form an element of impression in an æsthetic complex, but only those pleasures are judged æsthetic which (relatively speaking) are permanently pleasurable in memory"; and the converse is also held to be true that "that object is to be considered ugly which produces a psychosis that is permanently disagreeable in revival." Kant's contention that the judgment as to beauty has universal validity, while that concerning the agreeable is individualistic, his theory that all interest must be lacking in the beautiful, and his view that beauty has no direct relation to morality, are considered and commented on somewhat unfavourably by the author. He believes that, on the contrary, usefulness and even recognisable usefulness, as in the case of architecture, may be an element in the æsthetic impression. "Usefulness," the author holds, "*per se* is not of so high importance as is the absence of non-usefulness, as is indeed all avoidance of shocks." And he condemns in the strongest terms Ruskin's view that "it is the emphasis of the useless things in structure which makes architecture out of building." As to the physical basis of pleasure and pain Mr. Marshall gives the following as a working hypothesis: "Pleasure is experienced whenever the physical activity coincident with the psychic state to which the pleasure is attached involves the use of surplus stored force. Pain is experienced whenever the physical action which determines the content is so related to the supply of nutriment to its organ that the energy involved in its reaction to the stimulus is less in amount than the energy which the stimulus habitually calls forth."

The author appears as a man of erudition and laborious thought; but we are not struck by any felicity of idea or expression. His style is obscured by elaborate effort after special lucidity.

LIBRARY TABLE.

Follie Muliebri. Per GEMMA FERRUGIA. 2° migliaio. (The Vagaries of Women: A Novel by GEMMA FERRUGIA. Second thousand.) Milano: Omodei Zorini. 1893.—If we were asked to name a modern Italian novel which the traveller, on a first visit to Italy and possessing a "reading knowledge" of the language, ought to put in his pocket, it is the "Follie Muliebri." In the first place it embodies a deeply interesting and, in some parts, powerfully dramatic story; secondly, it is written in the most recent idiomatic style, furnishing, especially in the numerous dialogues, useful models of conversation; thirdly, and from the political point of view, it gives penetrating glimpses into the life of the toiling Italian poor in the agricultural districts—glimpses which enable us to understand the "revolt of labour" recently suppressed, though by no means stamped out, in Sicily and Calabria; and lastly, and most important of all, it deals expressly with those phenomena, physiological and psychological, which in their social and criminal aspect are being studied nowhere more keenly than in Italy. In fact, it is a real-life commentary on much of the teaching of Professor Lombroso and his school, and

though affecting to differ from his tenets, it furnishes, in the very explanations it offers, suggestions and details which that *savant* himself would be the first to welcome. We have no wish to anticipate the plot, but will only remark that three types of female development—each of them illustrating a "follia" or derangement—are evolved, the scene being placed in a North Italian château, the character and appointments of which are described with unusual skill. We have the masterful, self-willed, adventurous type, resulting in a low and unfortunate marriage; we have the conventional, fanatically conservative type, adhering rigidly to tradition and wedded, by an equally ill-assorted matrimonial arrangement, to a worthless *roue* in high life; and finally, we have a mystic, purely religious type, which, out of sheer devotion to its object, is at once seducer and seduced—this last specimen of "follie muliebri" being, on the whole, the most dramatically perfect of the trio. The interplay and contrast of these three—all sisters, and all victims of organisation uncorrected or unmodified by sound upbringing—are most interesting and quite explain the extraordinary popularity the book has met with in Italy. It is, indeed, one of those novels which will not only beguile a long journey or a rainy day in a hotel, but will stand a perusal on account of its subtle delineations of character and its bearing on some of the most agitated social questions of the day.

An Introduction to Practical Bacteriology for Physicians, Chemists, and Students. By Dr. W. MIGULA. Translated by M. CAMPBELL, and edited by H. J. CAMPBELL, M.D., M.R.C.P. Lond. With 9 Illustrations in the Text and 2 Plates. (Introductory Science Text-books.) London: Swan Sonnenschein and Co. 1893. — In placing Dr. Migula's "Introduction to Practical Bacteriology" within the reach of English students, Dr. Campbell has cleared away one of the difficulties attending the study of bacteriology in this country, especially as studied by those who have not a large amount of time to devote to the subject. Whilst not pretending to be a complete text-book on the subject, this work contains all the best methods of preparing media, of making various kinds of cultivations, and of staining and studying bacteria so cultivated, or in fluids or tissues. The methods of carrying on bacteriological examination, the relation of micro-organisms to suppuration, and a more or less detailed description of some of the commoner and better known organisms, such as the anthrax bacillus, the bacillus of Chaubert's disease, the tetanus, typhoid, and tubercle bacilli, the various pathogenic spirilla, such as those described by Koch, Finkler, and Metschnikoff, and also Obermeyer's spirillum of relapsing fever. The bacillus of pneumonia, of erysipelas, and diphtheria are all very briefly sketched, and then a very short account is given of the pathogenic bacteria found in animals. In the 240 small pages of printed matter here given there is laid down an admirable introductory course for the student of bacteriology, a course which has evidently been carefully put to the test by the author, and in which nothing has been taken for granted, so that, although a number of methods that have been described are completely ignored, all those that are given may be looked upon as valuable, because they have been carefully tested before being incorporated. For this reason the book has a special value, and we cordially recommend it to those attempting to master the elements of bacteriology.

Disinfection. By MARY TRUMAN and EDITH SYKES, A.S.I. (County Council Lecturers). London: The Roxburghe Press. 1894.—This pamphlet forms the second of the Practical Nursing Series issued by the Roxburghe Press. The subject matter is dealt with under four heads—viz., the need for disinfection, modes of infection, precautions in the treatment of infectious diseases, and the use of disinfectants, and there is added an appendix containing the legal enactments for dealing with infectious diseases. In insisting upon the need for disinfection and pointing out the gratifying results that have attended the efforts made for the prevention of the spread of infectious diseases the authors instance scrofula and leprosy as diseases which have become "mere names to us" through the enforcement of the principles of disinfection. If we allow the identity of scrofula and tubercle, we fear that scrofula is still something more to us than an airy nothing and a name. The authors suggest that every village should possess a comfortable cottage for the isolation of infectious cases, which should be nursed by a competent and well-trained staff; at the same time, they can see no reason why "the mother or nursemaid should not be allowed to live in the cottage with a child." In dealing with the precautions to be observed in the treatment of infectious diseases, although careful directions are given as to disinfection during and after the illness of the patient, the preparation of the room in which the patient is to be nursed is scarcely touched upon. In the appendix are contained a few of the provisions of the Notification of Infectious Diseases Act, 1889, and of the Public Health Act, 1875, relating to infectious disease.

George Chapman: a Narrative of a Devoted Life. By R. S. With a preface by the Rev. A. GURNEY. London: Swan Sonnenschein and Co. 1893. — The story of such a life as that of the late Rev. George Chapman, first vicar of the Church of the Annunciation at Brighton, can only influence its readers for good. He had a genius for pastoral work and priestly service and an ever-abiding sense of his sacerdotal responsibilities, and as a result he lived a life of perfect self-abnegation, striving after an impossible ideal, perhaps, as his main object, but incidentally doing incalculable good. This little biography is sympathetically written.

Analytical Records FROM THE LANCET LABORATORY.

INVALID SPECIALITIES.

(FREDERICK MASON, YORK WORKS, 52, ACRE-LANE, BRIXTON, S.W.)

The specimens of meat delicacies described below were found to possess a composition which is commonly exhibited by trustworthy and reliable preparations of this stamp. Thus the essence of beef gave the following figures on analysis and calculation: moisture, 87·61 per cent.; meat extractives, containing 2·00 parts nitrogen, 10·99 per cent.; mineral matter, 1·40 per cent. The concentrated beef-tea gave the following results: moisture, 30 per cent.; meat extractives, containing 10·42 parts nitrogen, 64·32 per cent.; mineral matter, 5·68 per cent. Similarly, the specimen of beef-tea jelly yielded the following data: moisture, 76·54 per cent.; meat extractives, 21·76 per cent., containing 3·82 parts nitrogen; mineral matter, 1·70 per cent. We have remarked before that as a rule preparations of this class are characterised by the absence of the really nourishing elements fibrin and albumen; but, on the other hand, they serve usefully and admirably as restoratives or stimulants. In addition to these, we have also examined specimens of meat lozenges which as regards composition were found to approach the concentrated beef-tea; they represent, therefore, a convenient and palatable form of this serviceable commodity. It is satisfactory to be able to add that the presence of objectionable preservatives could not be traced.

TEMPERANCE BEVERAGES, &c.

(H. W. CARTER & CO., OLD REFINERY, BRISTOL.)

Temperance drinks are fairly well typified amongst the products of this West of England firm; but although we fail to notice any very striking novelty in the character of the members of the list indicated below, yet in some cases

we have evidence for concluding that certain improvements, particularly as regards palatability and strength, have been made. Thus the lemon squash, lemon syrup, and lime-juice cordial give to the palate the impression of the freshly prepared product, and blend especially well with aerated water, the only objection that might be taken against them being that they are preserved, we find, with a notable quantity of salicylic acid. On examination the Bristol soda water yielded a residue equal to 10·8 grains per pint, which, according to its degree of alkalinity, approximates to 8 grains of bicarbonate of soda to the pint. The sample of aerated water, however, known as "Cliftonia," which is declared to be made from distilled water, gave a deliquescing residue which was found to contain chlorides. The residue showed also distinct signs of charring when ignited. Reactions of this nature, it is needless to point out, are not characteristic of water that has been carefully distilled and to which nothing (as, for instance, salt) has been added. The preparations respectively designated quinine wine, B.P., lime-juice cordial, and coca wine are entitled to commendation since, while palatable, they also contain a desirable quantity of the medicinal agents indicated. It remains to be added that the specimen of Jamaica ginger wine which was submitted with the rest was beyond all reproach, being free from objectionable irritants and from pungent substitutes. It possesses an agreeable aromatic taste and a degree of purity which should give it a place amongst the wholesome wines of this class. In the same way we have obtained no evidence which would enable us to dispute the genuineness of the ginger champagne.

GREEN PEA MEAL.

(W. T. KENYON AND CO., CORN EXCHANGE, LEEDS.)

This is a preparation of some dietetic importance, possessing a high nutritive value. On analysis it was found to be remarkably rich in nitrogenous substances, and the mineral matter, amounting to 2·17 per cent., gave evidence of a very satisfactory proportion of soluble phosphates. It is prepared in the form of meal to obviate the necessity of steeping the peas before cooking; and this is an indisputable advantage, since not only is time thereby saved and the flavour of the cooked product improved, but a greater nutritive value is probably secured and the digestibility of the legume increased.

VARIOUS TEAS.

(W. H. AND F. J. HORNIMAN & CO., 28-33, WORMWOOD-STREET, OLD BROAD-STREET, E.C.)

An opportunity has been afforded us of making a comparative analysis of various teas by the above merchants, who have submitted several samples which are fairly representative of the teas commonly sold to the public. The following results are chiefly of interest in showing the variation in amount (grains) of tannin, theine, and extract respectively yielded to a breakfastcupful, or ten ounces, of boiling water, in which a teaspoonful of tea had been infused for five minutes:—

Tea.	Tannin.	Theine.	Extract.
Ceylon (St. Leonard's estate)	2·93	1·69	17·66
Darjeeling (Mondakotee estate) ..	1·43	1·66	10·36
Assam (Hattigor estate)	3·59	2·56	17·06
China Congou	1·75	1·82	14·80
Lapsang Souchong (black)	2·54	1·89	18·05
Pure black	2·39	1·85	16·35

It will be seen that the largest amount of tannin is extracted from the Assam specimen; but it also yielded the best proportion of theine. On the other hand, Darjeeling tea yielded only 1·43 grain of tannin, and the rest of the specimens quantities intermediate between these two. It is desirable, therefore, that the blending of teas should not be based merely on the view of securing an acceptable flavour, but also towards effecting a mixture in which the tannin is not excessive and the theine not diminished. Attention is evidently paid to these points according to the tests applied to several blends examined, in addition to the samples above enumerated. The crude adulteration of tea is a thing of the past, sophistication even with spent leaves being rarely met with now; on the contrary, the teas supplied to the public at the present time as typified in the above leave little to be desired, for they give distinct evidence of the care that is bestowed on the preparation and selection of the leaf and of the skill that is exercised to blend and to secure the qualities inherent in the various growths.

OBERTINE BISCUIT SANDWICH APPETISERS.

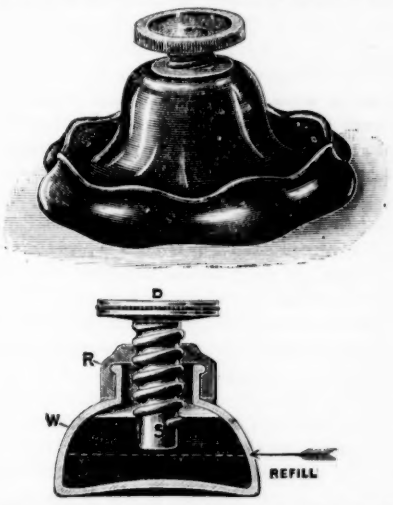
(3, MORNINGTON-PLACE, N.W.)

Although possessing distinct food value itself, the "obertine" biscuit is suggested as useful in provoking an appetite for more substantial things to follow. It consists of thin biscuits separated by a layer of meat paste, which may be composed of fish, flesh, or fowl. We have received four specimens, in which fish, meat, fowl, and truffled game formed the basis of the sandwich. The flavour, which is agreeably piquant, owes more to the condiment than the meat; in no case, however, could we trace the presence of objectionable substances or preservatives. This novel biscuit will be found convenient by travellers, tourists, and others in affording some stay until a substantial meal can be obtained, while it will doubtless be welcomed by many as an entr'acte source of sustenance when other food is difficult or inconvenient to procure.

New Inventions.

THE SCREW-STOPPER INKSTAND.

MANY ingenious devices have been made for conveniently holding ink and providing at the same time for its cleanly preservation from dust, but we have seen few that answer the claims put forward by the inventor better than the screw-stopper inkstand. The neck of the ink-well is fitted with an indiarubber collar, through which moves a screw stopper which, when turned in the downward direction, will compress the air and so force the ink into the dipping cup. A backward or upward turn of the screw, on the other hand, will lower the ink by removing the pressure, and thus will prevent waste and evaporation and the possibility of dust and dirt spoiling the fluid. The small amount of ink which the dipping cup contains when in use is all that can be spilled if the pot is upset. The bottle is easily cleaned. Another advantage is that the point of the pen cannot touch the bottom of the bottle. The inkstand can be obtained of the inventor, Mr. Edward Darke, 12, Pall Mall East, S.W.



THE LANCET.

LONDON: SATURDAY, APRIL 7, 1894.

"WHAT the orator receives from his audience in mist he gives back to it in rain." This splendid definition of the orator's power—a definition laid down in his "Homer and the Homeric Age" by Mr. GLADSTONE, himself a conspicuous exemplar of its truth—was brilliantly illustrated on Thursday, the 29th ult., at the inauguration of the Eleventh International Medical Congress. The occasion, the scene, the character of the audience, the common interests that had brought it together, all combined to inspire the official spokesmen with "the thoughts that breathe and words that burn," making them in the highest of all senses the "interpreters" of the mind and soul of that vast and diversified but truly one and harmonious assemblage. Sacrificing none of their individuality, the speakers each and all gave unity no less than force to the tide of thought and emotion which had its well-spring in the audience, and which from time to time, responsive to some stronger inflow of idea or sentiment, burst into manifestations of approval and pleasure that rang around the hall like a breaker thundering on the beach. So true it is that eloquence is lofty and sustained in proportion as the speaker rises to the height of a great argument and, with sympathetic strength of wing, remains poised above or circling around it until its power to interest or inspire is exhausted. That congenial atmosphere reigned in the mighty audience of the Congress on its opening day and found in the orators who breathed its spirit the worthy interpreters of its composite yet harmonious essence. No one went away unsatisfied or with the sense of having had his inner thoughts undeveloped, his sympathies inadequately read, or his mental attitude weakly embodied in words. Speaker and auditor were at one, the former having found the most fitting expression for what the latter was delighted to recognise as his own.

First to break the silence was the Prime Minister, Signor CRISPI, Italy's most masculine statesman, who, besides his exalted post in the councils of the King and Parliament, adorns the sister profession of law and enjoys the sympathy and gratitude of every Italian physician and sanitarian for the promptitude with which he took up and the energy with which he carried through both Chambers the hygienic code of his friend BERTANI, which has already achieved wonders for the peninsula and its people. Dwelling on the good fortune of Rome in harbouring so much mature science and so much generous initiation, he told the "high priests as well as devotees of the science of life" that new conquests were expected of them. The twofold mission of medicine in its humanitarian sphere is by hygiene to prevent, by the healing art to cure, disease—the former purifying the air and the earth, the latter rehabilitating by remedies the enfeebled body. Thanks to such beneficent activity, cities hitherto the haunts of sickness and death had even now become health-resorts, while sanitary reclamation had converted pestiferous waste-lands into smiling gardens. The authority such achievements impart must lend weight and influence to the Congress—nowhere more than in Rome, which with gratitude acknowledges the regeneration, physical as well as moral, she has, thanks to medicine, undergone. Once more the most historic of cities finds herself the common mother of humanity, entertaining within her precincts the representatives of civilisation in one of its noblest forms. Rome, the fountain of law, now reinforced by medicine, takes a new departure and goes forth on the propaganda of peace, which is at once the necessity and the hope of mankind. "This peace," he concluded, "is assured by the present World's Congress, which symbolises the brotherhood and solidarity of the nations." And with this lofty peroration Signor CRISPI, in the name of the King, declared the Congress open.

Worthily following the Premier came his right-hand man in the Cabinet, the Minister of Public Instruction, Dr. GUIDO BACCELLI, President of the Congress. He chose as his instrument the ancient language of Latium and wielded its robust and stately idiom with the ease of a master. Plunging *in medias res* he reminded his audience that last year Genoa, the birthplace of COLUMBUS, witnessed the great Powers assembled in their ironclads (*loricata naves*) to do honour to an Italian explorer, while to-day these same Powers send their biologists to tighten the bonds which unite all nations for the promotion of the universal good. These men, each in his way an explorer like COLUMBUS, would remember that the healing art has also its interests for the State; that in the palmy period of the Republic Rome's greatest citizens often turned from politics to medicine, which, as CICERO and CATO abundantly testify, forms a discipline in the noblest virtue. Meeting on soil into which the traditions of the world have already passed, the Congress once more reminds us that the human family is one, that each member of it must work for the welfare of the other, and so realise that magnificent formula of the Roman fathers, "Salus populi suprema lex esto"—a dictum flowing naturally from that other one of theirs, "Nulla re magis homines ad Deos accedere quam salutem hominibus dando." A graceful, courtly allusion to the presence of King HUMBERT and Queen MARGARET—"regiæ virtutis exemplaria"—included another not less happily turned to the representatives of the Italian Government, Senate, and Chamber; of the municipal authorities of the greater towns; of the "tota civitas" of the capital—all assembled and all of one mind—namely, to do honour to the deliberations of the Congress and to play the part of hosts to its members. We have given the speech in its original Latin in the columns devoted to the details of the Congress.

PRINCE RUSPOLI, the Syndic or Mayor of Rome, next spoke in cordial welcome of the Congress, and after him came the Rector Magnificus of Berlin University, RUDOLF VIRCHOW, also assuming the modern Italian—using it, moreover, with a dignity and a grace which even gained distinction by the refined Teutonic accent with which it was pronounced. Modestly ascribing the high honour he held of speaking next after such personages to the fact of his official connexion with the last Congress, he proceeded to set forth the claims of Rome to entertain the present

great meeting within her walls. All Western Europe, the whole civilised world in fact, is bound to honour Italy as the motherland of the Renaissance of the sciences, chief among which medicine owed to her for centuries instruction and resources enlarged by discovery. Torn as she has often been by civil strife and distracted by foreign aggression she has never wanted men vigorous in mind and buoyant with hope to keep always alight the grand beacons of science. And so we come to the modern era which has witnessed Italian unity, the rise of Italy to great power, and, with this, the multiplication of scientific institutions and the reaccession of Italians to the mighty League of Universal Medicine. It was to this grand result of Time that the last Congress did homage in choosing the Eternal City for the seat of its successor. This concourse "proves," continued Dr. VIRCHOW, "that the ancient yearning which drew the Northman to the smiling regions of the South is not extinguished; only, and Italians should know it, they come as friends, as brothers." "Physicians," he said, "are the born vindicators of humanitarian thoughts, habituated as they are to subordinate their own convenience to their neighbour's appeal, and to promote the cause of humanity by unselfish coöperation. They, more than the cultivators of other fields of knowledge, are destined to be the harbingers of peace and of charity. Every new International Congress reinforces the sentiment of solidarity in all the members of the corporation of the healing art, and stimulates the zeal in the search for a profounder harmony of the means which are destined to remove the obstacles impeding the welfare of the social organism. May the present Congress contribute to strengthen knowledge of truth, to enhance the intensity of the moral aspirations, to tighten the bond of fraternity between the colleagues of all countries; may it add another route to the many lines subserving the pacific intercourse of the nations."

The keynote struck by these consummate orators was played up to effectively by the speakers who followed, those of them who used Italian as their medium (and not a few of them did so with skill and effect) naturally eliciting the most marked signs of appreciation. From the inauguration theatre to the nineteen Sections the oratory of the presidents of the latter betrayed no decline either in originality of conception or in felicity of language. In truth, the Eleventh International Congress, if disappointing in some of its details—due, doubtless to the unprecedented proportions it has assumed—will be remembered as having outshone its predecessors in "medical oratory," a pre-eminence it could hardly have helped achieving under the inspiration of its presiding head, Dr. BACCELLI, who, at the second Congress of the series—that held in Florence a quarter of a century ago—drew from its French president the praise of having been the Demosthenes and the Cicero of its discussions.

THE history of medicine has from time to time to be rewritten, not only in consideration of new facts disclosed by literary research, but also by reason of the fresher, larger, juster view that a more exalted standpoint enables the modern historian to take. This reflection is irresistibly borne in upon the reader on perusing such occasional surveys of the medical past, recent or remote, as MOLESCHOTT gives in his memoir of DONDERS, or VIRCHOW in his rehabilitation of GLISSON. It is not that new details have been brought to light in these masterly monographs: it is that familiar history has been re-read by a keener, more experienced, better trained eye; and the result is a juster, more scientific appreciation of the subject.

What VIRCHOW did for GLISSON he has once more done for an even greater personage, GIOVANNI BATTISTA MORGAGNI. The theme was well chosen in itself, and equally so was the occasion of treating it. A meeting of the International Medical Congress in Rome was a fitting opportunity of reminding the world of what Italy had contributed to medicine, and of all men to whom the task could have been committed, a German of the standing and scientific record of RUDOLF VIRCHOW was the appropriate one. The outcome of this happy coincidence is a chapter in the annals of medical, chiefly pathological, progress which will remain memorable when much of the proceedings of the Congress is forgotten—an essay not more admirable for its knowledge, its noble impartiality, and its luminous characterisation, than for its masterly brevity of style and the haunting felicity of its phrases. In reproducing it in full in our columns we are aware that the processes of translation have a ruthless effect on the bloom of verbal expression

Medicine reveals to VIRCHOW, in spite of its twenty-five centuries, an unbroken, a manifestly continuous, development. Greek in its origin as a branch of nature study, it remains Greek to this day, as is apparent in its nomenclature, even in the barbarisms of the youthful moderns—barbarisms which labour to conserve at least the gloss of Hellenic origin. The retrospect taken by VIRCHOW is in this way far more reassuring than that of the traditional historian with his "revolutions of medicine," which he is apt to represent as gyrating in a vicious circle. Accretion, development, modification—all are features in the record of the art, bringing it, like every other human interest, within the supreme law of Evolution. The influence of the Eastern intellect on the Greek medicine is an especially instructive passage of VIRCHOW'S exposition. That spiritualistic element—that πνεῦμα,—in which he finds the first dim anticipation of magnetism and hypnotism, was an Oriental contribution of which not a trace is to be found in the purely objective mind of that Greek of Greeks — HIPPOCRATES. Passed through the Arabian alembic, the Greek medicine took a fresh departure, principally at Salerno, where GALEN lived again rehabilitated in Latin translations from the Arabic, but suffered from the contra-scientific influences of the Church. Here, again, VIRCHOW corrects a popular fallacy in the very restricted value he attributes to the mediæval hospitals under ecclesiastical control. These were, as their name implies, little more than "guest houses" where medical relief was but occasionally given, and that of a dubiously professional kind. Those among such institutions which really figure in the history of medicine owe that honourable pre-eminence to their having largely fallen into secular hands. Losing their sacerdotal character, they thus became auxiliaries rather than opponents in that struggle so decisive for the fortunes of medicine—the struggle for the enrolment of the healing art in the study of natural history—the

struggle "whose prize, or more precisely whose prizes, fell to anatomy."

The archæology of this most interesting question, When did human anatomy begin? gives VIRCHOW another opportunity of showing his twofold accomplishment in the scientific and the literary sphere. In the few strokes of a master he states the view of the Church which based itself on the infallibility of GALEN, whose authority no findings of the anatomist could possibly upset. But light at last broke in even upon the sacerdotal mind, and VIRCHOW indicates how, thanks to the Papal physicians, aided by their Apostolic masters, MONDINI of Bologna obtained permission to dissect a dead body and exhibit its parts for the instruction of his students. The flickering flame thus kindled at the mother of universities was caught up by a genius who, in his complex progeniture, summed up the characteristics of five nationalities, VESALIUS, whose culture, however, was mainly Italian. But the freshly fanned light of anatomy, even under the fostering care of a VESALIUS, was not enough to achieve the emancipation of medicine. A direct front attack on the central point of the dogmatic line of battle had to be delivered, and this was done by the great, if not always sound, intellect of PARACELSUS, before whom the humoral pathology began to waver. Still that grand position of medical orthodoxy, though shaken, held its ground, even after such discoveries as HARVEY'S, ACQUAPENDENTE'S, and MALPIGHI'S, which, by emphasising the importance of the ubiquitous blood-streams, made it difficult to dissociate disease from fluidity and its manifestations. BOERHAAVE'S epoch-making studies were of little more avail than to insist on the importance of local processes, and even these were still set down to local disturbances. In VIRCHOW'S words, the circulation still kept the foreground in pathological consideration and the Paracelsian idea of the "vita propria" of the organs was pushed aside as a spiritualistic vagary.

At this point MORGAGNI intervened, and at Bologna, where he prosecuted his studies, found himself in an anatomical atmosphere. MALPIGHI, ARANZI, VAROLI—all anatomical heroes—were the inspiring names, and VALSALVA came later to favour their influence on the young pioneer of pathology. Justifiable patriotic pride, which not even an international congress can extinguish, leads VIRCHOW to a most interesting, most instructive demonstration that the first to react under the forces which were rapidly moulding the ideas of MORGAGNI were the Germans who frequented the same school—a fact which explains the celerity with which the new method and the new doctrine associated with his name were adopted in Europe. And what, briefly stated, were these? The localisation of disease and its study at the various seats it peculiarly affects. "De Sedibus et Causis Morborum" was the appropriate title of the book which embodied the grand message to the practitioner. Unlike the frequently uncritical and untrustworthy "sepulchreta" and "collectiones" of an earlier age, MORGAGNI'S observations were not only checked by experience and minutely revised, but they were so classified as to certify themselves anatomically, to fall into line with clinical research, and so to lay down and to establish sound indications for diagnosis and prognosis.

"De *Sedibus* Morborum," reiterates VIRCHOW, insisting on the inestimable value of MORGAGNI'S contribution to medicine. *Where* is the disease? There is no ailing body which would betray alteration in every one of its parts. "That," says VIRCHOW, "is the sense of the words 'Sedes Morbi,' which MORGAGNI has placed on the pinnacle of his experience as the quintessence of the same." Of course, pathological anatomy does not pretend to localise every disease or refer it to a particular seat. In the vast field of neuropathology, even in that of toxicology, there are cases in which anatomical research is not enough. Not, indeed, contends VIRCHOW, because there is no "sedes morbi," but because the disease has induced no visible alteration in the affected parts; and anatomy has only to do with the visible—a domain in which physiology and chemistry can intervene and, even of the invisible, can say: this is the seat of the disease. So true is this that no physician can ordinarily think of a morbid process if he is not in a position to refer it to a place in the body. "Ubi est morbus?" is always the question with which the examination of the living patient, as also that of his dead body, must begin, and "if," adds VIRCHOW, "this examination has yielded no practical indication, yet the examination itself is not at an end; rather does the new task begin out of the *ensemble* of 'previous history,' especially of etiology, to ascertain on the path of reflection where the seat of the malady must have established itself. The field of inquiry becomes coextensive with the whole orbit of clinical medicine, but its pole star is still the leading question proposed by Morgagni—'Ubi est morbus?'"

It is difficult to assume the part of critic over a deliverance so thoroughly thought out, so conspicuously the result of observation checked by experience, as this monograph by VIRCHOW. Taking our stand on "the high *priori* road" we might indeed formulate objections or suggest doubts; but for the present at least we have no intention of doing more than recommending to our readers the perusal of a thesis which even in the country of MORGAGNI himself and at the hands of his most exacting worshippers has excited nothing but admiration and support.

THE science of prognosis has become a fine art, and it worthily formed the burden of the inaugural address which was delivered by the President, Dr. JAMES E. POLLOCK, at the first meeting of the Life Assurance Medical Officers' Association, and which is published at page 846 of our present issue. Many other topics were touched upon and some discussed, but again and again the refrain of prognosis became the motive of the theme. It must be remembered that in connexion with life assurance three distinct classes of medical men are employed — the medical attendant, who speaks of the past history, the medical examiner, who reports upon the present condition, and the medical officer, who advises about the future. The first two are usually asked for prognostic indications; but the actual responsibility for the acceptance and the rating rests entirely with the executive staff and with the chief medical officer, who have to bring the various

reports into harmony with the practice and experience of the particular office. A knowledge of prognosis, therefore, although interesting to all medical men, only reaches its highest importance in the chief medical officers, and it is for their instruction, guidance, and discussion of prognostic questions that this association has been formed.

In his prefatory remarks Dr. POLLOCK reviews the ethical question of using clinical experience to enable others to make money, and he seeks to allay any conscientious scruples by indicating the very numerous instances in which professional advice is sought regardless of any idea of the treatment of disease. It appears a little late in the day to revive this discussion, when almost all offices employ medical men to examine and report; still, it is interesting to note the grounds on which Dr. POLLOCK defends the position. Life assurance, he maintains, favours habits of economy; endowment policies provide for increasing responsibilities with increasing age; and an assurance occasionally enables individuals to raise funds for the prosecution of legitimate industry. The value of a policy in this last respect is, we believe, very largely overrated and misunderstood. It may be convenient, however, to pass by questions of collateral securities and surrender values, and to follow Dr. POLLOCK in his contention that, though the work of the profession is primarily the prevention and cure of disease, medical skill is commonly employed to facilitate the administration of justice and for the thousand and one points upon which questions of mental ability and disability rest. The analogy is perfect and the argument sound.

Without a doubt the growth of medical science widens the interest, influence, and scope of medical work. The day is far distant when the recognition and treatment of disease formed the boundaries of our sphere of usefulness. Medical men who refuse to give advice upon other matters, to use an Americanism, are likely to "get left." Observation and experience have taught much that is important to the welfare of the community, and there can be nothing derogatory to the profession in giving a honest opinion for an adequate consideration. Practically the whole ethical position has been decided by the example of the numerous leaders of the profession who have sought and have long held the appointments of medical officers to assurance companies. The modern tendency to employ younger men is probably to be explained by greater adaptability to recent researches, and by greater readiness to give time to the requirements of the offices, and it certainly is not due to any desire to minimise the importance of their work or to any reluctancy on the part of the senior members of the profession to undertake duties which might be considered to involve loss of status in exchange for an annual payment. The ethical situation might have been made much stronger by reference to the history of life assurance and by a comparison of the past and the present. When life assurance was in its infancy the average man—the ideal for which all offices seek—was more likely to propose than at the present time. In these days compound interest is more fully understood, and the result is that the man who fully believes in his prospects of life often refrains from assurance, while a large proportion of insurers consists of those who hope to elude the vigilance of the offices. Dr. POLLOCK does not mention this, but it affords a strong practical argument for the employment of medical examiners for life assurance. The real ethical difficulty seems rather to affect medical attendants than medical examiners. The latter are employed to examine and report upon the physical conditions of persons, who for their own advantage are willing to submit to this supposed ordeal. The medical attendants, on the other hand, are requested to give information of past illnesses, habits, and similar matters which may influence the prospects of the duration of life; in connexion with their reports undoubtedly many very private matters may be disclosed, but it should comfort all who have doubts of the propriety of making full statements to remember that these reports are confidential, and that in giving the name of his ordinary medical attendant the proposer has tacitly signified his willingness that he should be referred to for a report.

Returning, however, to Dr. POLLOCK'S remarks upon the value of prognosis, while there is much truth in his statement that the probable duration and termination of chronic affections are insufficiently taught in text-books or in medical lectures, he admits at once that a knowledge of these matters cannot be acquired by the above means. We venture to think that the whole success or failure of this, the youngest of the societies, turns on the recognition of individial characteristics, rather than the endeavour to put every case into a class. Every case of divergence from the normal type must be judged on its own merits. It is impossible, and it always will be impossible, in spite of such collective investigation, to assign a fixed value for any single deviation from the healthy standard. Even in cases of mitral disease or of albuminuria collective investigation of results of experience would lead to disastrous consequences unless the attendant conditions are fully weighed. However much medical officers may compare their experience and views with those of others engaged in the same intellectual work, they must always come back to careful examination of the proposer before them, and guard against applying general conclusions to the individual case.

Upon the whole, we doubt very much whether there is as much divergence of medical opinions as Dr. POLLOCK appears to consider. Although it is desirable to attain greater uniformity of results, there is another factor which Dr. POLLOCK has passed over—viz., the impossibility of attaining uniformity when frequently the recommendations of medical officers subsequently pass through the hands of others of the executive staff and then through the ordeal of a changing committee of laymen. Much may be gained by harmonious discussion between the medical officer and the actuary, but even after this the most cautious and well-considered "prophetic guesses" may be thrown away by the action of the committee.

When speaking of the influence of heredity Dr. POLLOCK noted a fact which is often overlooked—the transmission of variations in the form and structure of physical organs, as well as the transmission of liability to suffer from similar diseases, even though these do not usually fall into the category of hereditary diseases. Of other suggestive remarks in this paper it is difficult to speak, partly because they are numerous and partly because they seem to have been intentionally thrown out to provide food for discussion at subsequent meetings.

While wishing the association every success, we feel that it is possible that its course may not be unchequered. It is difficult to imagine that offices will view with equanimity any attempt to "ascertain the exact rating which they are in the habit of assigning to second-class lives," and, unless the proposer in question is produced and examined, it is still more difficult to realise how notions of exact rating and uniformity of action are to be attained. Dr. POLLOCK has shown that there is much to discuss, and he has written an interesting paper; but although the tyro in life assurance may desire to learn general rules he will not have advanced very far before he finds in this, as in every other branch of medicine, that general rules must constantly be thrown aside when dealing with special instances.

Annotations.

"Ne quid nimis"

THE PROPOSED TEACHING UNIVERSITY FOR LONDON.

WHEN the report containing the recommendations of the Royal Commissioners appointed to consider and alter, if they thought fit, the Gresham University Charter was first issued we pointed out that these recommendations would be found unworkable from their very comprehensiveness and from the complex and varied interests which they would affect. Instead of recommending a metropolitan university for local purposes on the Edinburgh or Victoria pattern, and thus allowing the existing university to pursue its great Imperial work of examining all comers on the same plan and judging them by the same standard, the new scheme has endeavoured to unite local teaching functions with an Imperial examining system. Indeed, the Commissioners seemed to have occupied themselves in considering what kind of a university would be suitable to the first city of the Empire rather than the practicability of the establishment of any university at all. In embracing every institution, engaged however remotely in higher education in London, the necessity of giving a proper position to the existing teachers in arts and science, inclusive of medicine, who are really now carrying on the work of a teaching university, has been underrated. An academical council of fifteen members is too small to be representative. The Royal College of Surgeons has approved of the scheme, and so, we presume, will the comitia of the Royal College of Physicians; but, as the Royal Colleges have not before been admitted into any scheme for a teaching university in London, it is easy to understand why they consider this one to be the "most comprehensive and academic hitherto proposed." It is in their corporate capacity as colleges that they desire to be included in any reorganisation of medical education and examination in London, and it is clearly in their interest that they should be so included. The medical schools have not agreed on any combined action, and it seems doubtful whether they will agree thereon. A general consensus of opinion of the teachers at the medical schools is somewhat in favour of the new scheme; but when details are discussed the greatest discrepancies at once become apparent. In fact, the recommendations of the Royal Commissioners have excited but little enthusiasm among the teachers in our medical schools, and the apathy of the London practitioners was clearly shown by the small attendances at the recent meetings of the Fellows and Members at the Royal College of Surgeons. University College, mainly guided by its teachers in arts and science, has declared unequivocally in favour of the recommendations, but King's College seems to be awaiting further developments before accepting or rejecting the scheme. The University of London is placed in a very peculiar position. Some members of the Senate are most strongly advising the suggested reconstitution of the University, whilst others as strenuously urge the maintenance of its present position and the continuation of its work on the ancient lines. A third set of Senators is, however, supposed to be "sitting on the fence," and for them the vote of Convocation on the 10th inst. will be of great importance. The resolutions of the annual committee, which we published on the 17th ult., are opposed, root and branch, to the scheme of the Royal Commissioners, and if they are accepted by the members of Convocation by a large majority—as from the past history of Convocation we deem not improbable—any early settlement of the question seems out of the question. Indeed, the Government has intimated that they do not intend to propose legislation on the subject this session, and we doubt very much whether Sir Albert Rollit will shake this resolve when he calls attention thereto on the 20th inst. The meeting of Convocation on Tuesday next must have a great influence as to how the question will be dealt with, and will be decisive as to whether any real pressure can be brought to bear on the Government, and must encourage it to seriously consider the unique position of London in respect to university education.

DEATH OF PROFESSOR BROWN-SÉQUARD.

IN Professor Brown-Séquard, who died at Paris on Saturday last, the medical world has lost a very extraordinary personality as well as a distinguished physiologist and neurologist. He was a true cosmopolitan, and could claim with equal accuracy London, Paris, and New York as his own capital, in which his most distinguished work had been done. In the first city he was early associated with a flourishing hospital, in the other two he held various professorships, and in all he was recognised as a remarkable and learned man. He may also be considered to have been something of a prophet—that is, he had the prophetic instinct which is the astonishing attribute of some few gifted men, enabling them to jump to conclusions, which, correct or incorrect, have the right direction, and prove illuminating guides to more methodical and tardy followers. There can be no doubt that Professor Brown-Séquard's later therapeutic departures were widely considered to be empirical; and there can be no less doubt that he would have found them, in the present state of our physiological knowledge and of his, impossible to defend on logical grounds. Yet those departures were prophetically right if specifically wrong; for undoubtedly it is to the recently deceased *savant* that the medical world owes the initiation of the treatment of disease by the injection of animal extracts. Our Paris Correspondent this week (*vide* p. 906) gives a sympathetic notice of a death which all England deplores equally with *tout Paris*. We hope next week to supplement this notice by information derived partly from his intimate colleagues during his sojourn in London and partly from our own columns, to which he was a frequent contributor.

A MEDICAL CORPS FOR WOMEN.

THIS is pre-eminently an age of emancipation. The tendency of social evolution is to bring all classes of people into the competition of life on a footing of equality of opportunity, and nothing short of the stress and strain of actual experiment will, we suppose, be deemed a sufficient test of the fitness or unfitness of people to fulfil the duties and functions appertaining to different walks of life. Having regard to the enormous waste of energy, to the dissipation of effort in

fruitless attempts to discover suitable occupations, to the *ennui* that attends the capable who have no scope for exercising their capabilities, and to the struggles to uplift themselves from the dead-level, tideless waters of a genteel poverty in which so many are apparently doomed to pass their existence, we cannot be surprised at the growth of a spirit of emancipation, and a struggle—and sometimes a very silly struggle—for the equality of the sexes; but what does surprise us is that women should select such unlikely and unsuitable outlets for the exercise of their energies. Could there be a more unpromising and absurdly impracticable scheme, for example, than this one of a medical corps for women? To begin with, war is not, happily, an everyday occurrence, and, as far as this nation is concerned, they are generally small wars in hot and unhealthy climates, against savage or semi-civilised foes, in countries with topographical obstacles, and where transport is one of the great difficulties to be overcome. Then, again, is it possible to believe that women, unless descended from a race of Amazons, could be organised into an ambulance bearer corps for the transport of sick and wounded soldiers on stretchers, even granting that a revolution took place in their dress and that the members of the new corps appeared in tunics, knickerbockers, and gaiters of quasi-military cut? Nor is this all, for the women composing the corps are to be instructed, it appears, in the use of firearms. If the real and not the assigned object is to afford succour and render service to the sick, why not form a nursing corps to meet the requirements of epidemics and outbreaks of disease in unhealthy climates where nurses are urgently needed and difficult to obtain, and where there is no glamour of war or hopes of being decorated and ribboned, and where there are no bright uniforms or officers to attend—and, shall we add, possibly marry? Notwithstanding the enthusiasm which was stated to have prevailed at the recent meeting at the Ideal Club, we are of opinion that the lady members will have to set up some other ideal than that "for organising the forces of the sex who were willing to offer the best of their newly strengthened powers for the service of the State." Even if the intention be to organise a woman's ambulance corps as an adjunct to the volunteers in case of an invasion of this country the ladies will have a long time, we hope, to wait before their services are utilised.

MUSSEL POISONING.

A FATAL case of poisoning attributed to mussels occurred at Yarmouth in the course of last week, and presented several curious features. The man, a quay labourer, is said to have previously enjoyed good health, but to have been thrice previously poisoned by eating mussels. From the evidence given at the inquest it appeared that his brother and his sister-in-law shared between them a quarter of a peck of mussels, taking with them vinegar, pepper, salt, bread and butter, and tea. The mussels are said to have been quite fresh, properly boiled, and well cleaned. Within two minutes of finishing the meal the deceased was suddenly taken ill, he felt giddy, staggered about, and complained of pain all over him and of "pins and needles." When seen by a medical man, who was hastily summoned, he was lying down, his eyes were staring, the pupils were dilated, and a frothy fluid was issuing from his mouth. The heart had ceased to beat, and the face was congested. Death is said to have occurred within twenty minutes of the onset of the symptoms. The medical man who attended stated at the inquest that, in his opinion, death was due to asphyxia caused by mussel poisoning, and a verdict to this effect was returned. It does not appear that any post-mortem examination was made, and without this evidence the case presents several difficulties. The medical attendant stated that he forced his finger down the deceased's throat, as he thought he might possibly be choked by a mussel, and there does not appear to be anything in the evidence to negative the correctness of this view. On the other hand, the rapidity of the onset and course of the symptoms are peculiar, and it is noteworthy that the other two persons who had eaten an equal share experienced no ill effects. While making all allowance for idiosyncrasy, which was largely relied upon in this case, it must be admitted that it is a subject of regret that no post-mortem examination was made. True cases of mussel poisoning do not usually present the train of symptoms above described, and, when they occur, they mostly affect all who have partaken of the meal. That the deceased died after eating mussels is certain, but it is not so clear that any toxine was at work; death might have been due to some previously existing pathological condition or to an infinity of other causes, which might have been revealed if the body had been examined after death. As the matter stands it would obviously be incorrect to quote this case as one typical of mussel poisoning.

CHOLERA, AND THE HYGIENIC MANAGEMENT OF PILGRIM GATHERINGS.

WE have quite recently been presented with accounts of the great spectacle which took place in connexion with the obsequies of Kossuth at the Hungarian capital, and of the crowds of people which had gathered together from all parts of the country to express their devotion to their dead patriot, but the compact mass of human beings present on that occasion was as nothing to the vast concourse of people that assembled lately at the Hindu religious gathering at Allahabad in order to bathe in the holy place where the waters of the Ganges and the Jumna meet. The *Indian Medical Gazette* of last month contains a highly interesting and important description of this great religious festival. Every twelfth year these gatherings assume gigantic proportions and take the name of Khumbs, and that at Allahabad in part of January and February of this year was a Khumb. On two days—namely, February 6th and 10th—to go down to the sacred ghat and bathe is devoutly desired by the religious pilgrims and regarded as a consummation that brings happiness to the pious Hindus. The former day is the more important, and an enormous concourse of people collected from all parts of India to be present on that occasion. It was estimated that nearly 3,000,000 pilgrims and some 25,000 fakirs assembled at Allahabad on Feb. 6th last and took part in the great religious ceremony. Now, to provide for such a vast multitude is in itself a herculean task in the way of organisation and administrative ability; but Dr. Hutcheson, the Sanitary Commissioner for the North-West Provinces, and Dr. Giles, the Deputy Sanitary Commissioner, successfully carried it out with safety alike to the vast crowd of pilgrims and the population of the surrounding country. No outbreak of cholera or other epidemic disease occurred. This is not the first occasion on which Dr. Hutcheson has shown that it is quite possible to deal sanitarily with such gatherings, for at the Hurdwar Fair in 1891 his arrangements were also successful. He was able to demonstrate on this occasion, however, that an assemblage three times the size of that at Hurdwar can be organised and managed on the same principles and in similar fashion. These gatherings are mainly religious, but partly mercantile. To prohibit them altogether would be regarded by the Indian population as a cruel and unwarrantable interference with their religious convictions and duties, and experience has shown that if proper sanitary arrangements are made outbreaks of cholera are not a necessary concomitant of these pilgrimages. To devise these sanitary measures, and, still more, to apply them successfully, no doubt demands the outlay of a good deal of money as well as the exercise of the highest organising skill, but

an epidemic of cholera costs a great deal more in the expenditure of both life and money, and the Indian Government is obviously bound to take every practicable precaution in the interest of that and every other country. At the same time, we think that European countries and governments fail to realise the immensity of the task imposed upon the Indian authorities, and to give them that amount of credit which they deserve for the efforts they are making. We are glad to learn that Mr. Hankin, the Government bacteriologist, was present at the Allahabad gathering with the view of carrying out such scientific investigations as the opportunity presented. It is satisfactory to learn, too, that the pilgrims were grateful for the plentiful supply of good water afforded them and for the hygienic arrangements which were made for their convenience and comfort, and to be assured that they proved perfectly amenable to the regulations laid down for their guidance. We entirely concur in the recommendations of our contemporary—namely, that a plan of sanitation, based on the experience obtained at Hurdwar and Allahabad, as supervised and directed by Dr. Hutcheson, should be drawn up for the future guidance of sanitary and medical officers, and that in all large gatherings several medical officers should be deputed by Government to be present in order to learn the management of big encampments.

PUBLIC SCHOOLBOYS AS REGISTERED MEDICAL STUDENTS.

THE General Medical Council will have to take speedy action to prevent a wholesale evasion of their recent regulation enforcing a five years' curriculum on all medical students subsequent to their being registered. The new departure is to register as medical students all schoolboys while they are still doing their school work on the science side. Students can only be placed on the register either as attending at a recognised medical school, or as the pupils of a legally qualified practitioner. This latter condition was made to meet the wants of practitioners in town or country who could take charge of one or two, or perhaps three, pupils and instruct them in the rudiments of medical science, minor surgery, and elementary medicine; but now the Committee of Management of the Conjoint Board in England has recognised St. Paul's and some other public schools as institutions in which chemistry, physics, and biology may be taught. If this teaching were antecedent to registration, it would be of advantage educationally to the schoolboy, although the parent might demur to a five years' medical curriculum being extended by this additional year at school. Such a difficulty is easily surmounted by making the boy a nominal pupil to a medical man whilst he is still spending his days at school. We will refrain from expressing our opinion, which, however, is a very decided one, on the tactics of those masters of public schools (for such an action is not likely to be limited to two or three schools in these days of fierce competition, and Conjoint Boards will be unable to draw a line at any school with a science side) who thus transgress the spirit of the resolutions of the General Medical Council, or on practitioners who sign the required form of certificate for registration, knowing that the boy is still at school. The medical officer to a public school may even be expected to register as pupils every boy in the science classes. Even the University of London is not blameless in this matter, for it has recently passed a resolution "That matriculated students of the university intending to graduate in the Faculty of Medicine be advised that they should register themselves as medical students immediately after passing the matriculation examination, unless they have previously so registered." The members of the Senate must be fully aware, from a mere glance at the pass-lists of the preliminary scientific examination, that a large number of their matriculated students learn their science at school, and the advice that these should get registered, for it cannot apply to those who enter a recognised medical school, seems to us a little suggestive of sharp practice. The General Medical Council must protect its regulations against such a deliberate evasion, and insist that schoolboys engaged in every-day school work are only schoolboys still, and that the students at a recognised medical school, and *bonâ-fide* pupils to a practitioner engaged in assisting him in his practice and learning its details, can alone be considered as having any claim to be registered in the ranks of the medical profession.

A FATAL SURFEIT.

THE net gain resulting to those who lay themselves out for the enjoyment of a bank holiday would be somewhat difficult to estimate. We shall probably be justified in placing the balance obtained by a general calculation on the side of profit, but there can be no doubt that exceptional cases having an opposite significance are by no means wanting. Such a one was recently made the subject of a coroner's inquiry at Lambeth. The facts of causation related were so remarkable that we cannot be surprised at their effect. Death in this instance was due to cerebral apoplexy, following immediately after an extraordinary surfeit of thirty oranges, an entire cocoanut, cider, a mince-pie mineral water champagne, tea, cake, and lemonade. The deceased was a lad of fifteen. Whether any one of all the ingredients contained in this remarkable collection was more particularly accountable for the fatal issue we will not pretend to decide. In their mass and variety there is not wanting ample material for the development of noxious organic substances. We rather incline, however, to the view that death in this case was the effect mainly of mechanical causes, consisting in over-distension and irritation of the stomach and intestine, consequent obstruction of cardiac action with reflex inhibition acting through the vagi, the result being asphyxia with cerebral stasis and hæmorrhage. Altogether the narrative is a melancholy and humiliating reminder that pleasure, above all things, can only be enjoyed in moderation and is poisonous in excess.

BAKERIES.

DR. WALDO, medical officer of health for the district of St. George-the-Martyr, has once more called public attention to the insanitary conditions under which bread is baked. He estimates that one-half of the bread consumed in London is made in underground bakeries. In his own district, out of sixty-seven bakeries, twenty-three are altogether underground and nine are partly below the streets. He is of opinion that this proportion is exceeded in other parts of London. The medical officer of health of St. George's, Hanover-square, one of the richest quarters of London, stated before his vestry that most of the bakehouses of his district were underground. They were inefficiently ventilated, and though the sanitary conveniences did not actually open into the bakehouses, as was the case formerly, still the latter were affected by the foul air. We have visited bakehouses in both these districts and can confirm the accuracy of these statements. It is not surprising that men constantly working in such places should lose the sense of cleanliness. They live and work in the midst of cockroaches, blackbeetles, spiders, ants, rats, and mice. Cats and dogs, not over-clean in their habits, come and hunt amidst the flour and the bread. The men smoke, chew tobacco, and spit about. They are abominably overworked, toiling sometimes a hundred hours in the week and very frequently as much as seventy-two and eighty hours. The bakeries are often so small, the heat is so intense and the

ventilation so completely neglected that the men fall ill at an early age and the strongest constitutions are shattered. All this has been described in a special report published on Nov. 30th, 1889, and we trust that the grievances then brought forward will be related over and over again, with fresh cases and newer evidence, till at last the law relating to bakehouses is revised and the sanitary authorities are armed with sufficient power to sweep away the noisome cellars where the bread of the rich and the poor alike is now made. It is also a well-known fact, which Dr. Waldo does not seem this time to have mentioned, that journeymen bakers often sleep in the bakehouse. They lie down on the boxes where the dough is mixed, and a sack of flour does not make a bad pillow. Considering that these men have but little time or inclination to indulge in personal ablutions, the idea is not a pleasant one. When the hours worked are shorter the journeyman baker will have time to go home to sleep and to wash. Till then we can scarcely complain if he is dirty and careless; but we can and must demand a complete reform of the whole system which produces such a revolting condition of affairs.

SOME POINTS IN THE PATHOLOGY OF THE TESTICLE.

DR. GRIFFITHS of Cambridge has continued his investigations into the pathology of the testicle and communicated the results in the last volume of the *Journal of Anatomy and Physiology*. We gave last year[1] a summary of his observations with regard to the "structural changes in the testicles of aged persons" and the "structural changes in the testicle of the dog when it is *replaced* within the abdominal cavity." He has examined various examples in which the testicle has been *retained* in the abdomen in man and the dog and finds (1) that the *retained* testis in man and in the domesticated animals is of small size, and the seminal tubules, though smaller, are more distinct owing to the disproportionate amount of inter-tubular connective tissue; (2) the walls of the tubules are thick from the formation of fibrous tissue on the inner surface of the tunica propria, the epithelium is scanty and columnar, and there are no traces of spermatogenesis; (3) the testes in cryptorchids, though they are incapable of producing spermatozoa, are yet capable of exerting that influence which the natural testes exert upon the development of the penis and the growth of the body; (4) the function of the testes—namely, that which influences the growth of the body at puberty—is distinct from that of the production of spermatozoa, the latter necessitating a more specialised development of the tubules of the gland than the former; and (5) the testes do not acquire their full (spermatozoa-producing) function except at the furthermost point of descent from their primary position. He has also examined the "testes and prostate gland in certain eunuchoid persons"—that is persons in all respects like eunuchs except that in them the testes, though small, are in the scrotum. His conclusions with regard to them are: 1. In eunuchoid persons the testes are of small size and almost entirely composed of fibrous tissue, the seminal tubules being represented by fibrous rods with fissure-like lumina containing atrophied epithelial cells. Although thus altered, the testes retain their normal shape and form. 2. The epididymes are large relatively to the bodies of the testes, and the tubules in most of the lobules of the globus major are natural, the tubules in some few lobules being altered as if by chronic inflammation. 3. The prostate gland is small, tough, and fibrous, and the glandular tubules are but few in number and but imperfectly developed; the vesiculæ seminales are also of small size, and devoid of any secretion in their interior. 4. Where the testes lose their power of growth, from whatever cause, the individual develops at puberty like a eunuch deprived of his testes in early life. Such a person he has therefore called "eunuchoid." He further gives the following conclusions as the result of his investigations respecting the "appendix of the testicle and the cysts of the epididymis, the efferentia, and the rete testis." 1. That the appendix of the testicle, known as the collapsed or sessile "hydatid of Morgagni," is a small, solid, corrugated body, best seen in early life; it is covered by a single layer of columnar, non-ciliated, epithelial-like cells and is composed of fibrous connective tissue, in which there are numerous bloodvessels. It is not of a cystic nature, like the cysts (hydatids) found in this neighbourhood. 2. The small, sessile, or pedunculated spermatozoaless cysts, often multiple, originate as small buds or outgrowths of the tubules, which may or may not have originally been in connexion with the interior of the tubules. 3. The small spermatozoa-containing cysts originate in dilatations of the tubules of the coni vasculosi. 4. The large spermatozoa-containing cysts originate in dilatation of the tubules between the testis and epididymis. 5. The small cysts on the sides (chiefly outer) of the body of the testis originate in dilatation of lymph spaces in the superficial layers of the tunica albuginea.

[1] THE LANCET, July 29th and Sept. 30th, 1893.

BARON HIRSCH'S GIFTS TO MEDICAL CHARITIES.

BARON HIRSCH, who last year distributed among selected charities a sum of about £42,000, has this year provided a sum of £15,000 to be divided among London hospitals and charitable institutions. The London Hospital is the recipient of £1000 and the Brompton Hospital for Consumption receives £600, while St. George's Hospital and Charing-cross Hospital each receives £500. The remaining amount has been divided among the various other charities in sums of from £500 to £100, the French Hospital and the Jewish Convalescent Home both participating in the distribution. The amount given by Baron Hirsch to charities last year represented his gross turf winnings in public stakes for the years 1891-92. At the end of the season 1893 his winnings amounted to £7500, but, this sum being so small in comparison with his bequests of last year, he has generously doubled the amount. Baron Hirsch's example is well worthy of imitation by other magnates of the turf. So far as our recollection carries us, the Duke of Portland affords the only other instance, nowadays, of a racing man who makes the pursuit of what is practically a pleasure contribute to the relief of his less-fortunate and suffering fellow creatures.

THE PASTEUR INSTITUTE.

IN the annual report of the Pasteur Institute it is stated that 1648 persons have come under the antirabic treatment during the past year, and that amongst this large number of patients bitten by rabid animals there were only six fatal cases. Of these six fatal cases it is pointed out that in two the first symptoms of hydrophobia made their appearance within fifteen days after the last inoculation, and the treatment had not a fair chance of success. Leaving these two deaths out of account there were four deaths in 1648 cases, giving an average mortality of 0·24 per cent., a mortality as low as that of the two previous years, 1891 and 1892. Three of the four fatal cases were attacked by the disease during the course of inoculation, and the fourth died during the course of treatment, in spite of all efforts to save the patient. It will thus be seen that in none of these four cases had the treatment been completed when the patient succumbed. The following is the *résumé* of the three sets of patients treated during the year: (*a*) Patients bitten by animals which were after experiment proved to have suffered from rabies: wounds on the head, 12; on the hands, 80; on the limbs, 40. Total, 132 (without a single fatal case). (*b*) Under the second heading come those bitten by animals which had been

certified to be suffering from rabies after a veterinary examination: wounds on the head, 89; on the hands, 534 (with three fatal cases); on the limbs, 385. Total, 1008 (with three deaths). (*c*) Under this class come those patients bitten by animals simply suspected of suffering from rabies: wounds on the head, 34; on the hands, 243 (with one death); on the limbs, 231. Total, 508 (with a single death). We have thus a total of 135 patients bitten on the head, 857 (four deaths) bitten on the hands, and 656 bitten on the limbs. Total, 1648 cases (with four deaths). Most of the patients treated (1470) were natives of France; 178 were from other countries—England sending 23 and the United States 1. There were also 14 British Indian subjects. Since the foundation of the institute no fewer than 14,430 patients have been treated by the Pasteur method; amongst these 72 deaths have occurred, giving a percentage mortality of 0·50. Of these patients 1213 (16 fatal cases) were bitten on the head, 8032 (45 fatal cases) on the hands, and 5185 (11 fatal cases) on the limbs.

TUMOUR AFFECTING THE RESTIFORM BODY.

A CASE of an interesting and uncommon character published in full in the *Progrès Médical* by Brissaud is abstracted in a recent number of the *Neurologisches Centralblatt*. The patient was a woman of forty-five who had no personal or hereditary history of significance. In 1885 she began to suffer from a slowly developing deafness of the left ear, and a year later the sight of both eyes was affected. *Tic convulsif* of the left side of the face was soon superadded and five years from the commencement of the symptoms pain over the sacrum, weakness of the legs, with stiffness and pain in the cervical region, were experienced. In the same year loss of smell came on. Since 1893 intense headaches, starting in the neck and occurring especially in the mornings, were very troublesome and frequent. In July of that year there was transitory œdema of the legs, and in the following month difficulty and unsteadiness in walking. In October there was an attack of loss of consciousness lasting an hour, and retraction of the head and opisthotonos were frequently present. The reflexes were not affected, and the upper extremities were normal. Optic neuritis was present on both sides, and difficulty in swallowing occurred. A diagnosis was made of tumour in the neighbourhood of the corpus restiforme, and this was confirmed by the necropsy. The tumour involved the cerebellum, but had apparently commenced in the upper and outer part of the restiform body, and had involved the auditory nerve at its exit from the skull.

THE MEDICAL DEFENCE UNION.

AN appeal in the case of "Bloxham *v.* The Medical Defence Union" by the plaintiff against the refusal of Mr. Justice Chitty to grant an interlocutory injunction restraining the defendant union, their council, &c., from subscribing, advancing, or paying out of the union's funds any moneys towards the costs and expenses of a member of the union in litigation with another member, from undertaking the conduct of any such litigation, and in particular from subscribing, &c., any moneys towards the costs and expenses of a member in a litigation pending between the plaintiff and that member, and from undertaking the conduct of that litigation, was heard in the Court of Appeal before Lords Justices Lindley, Lopes, and Kay on April 4th. The facts of the case, so far as they have publicly transpired, will be within the recollection of our readers. At the hearing of the case Mr. Byrne, Q.C., who appeared for the defendants, said (we quote from *The Times* of April 5th) "that since the rising of the Court yesterday afternoon he had considered the matter in conjunction with his clients, and they had come to the conclusion, having regard to what had fallen from the Court during the argument as to the unfairness of not allowing Dr. Bloxham to put his case before the council of the union, that an error had been committed. The defendants were, therefore, willing to consent to a perpetual injunction restraining them from applying the corporate funds to the litigation between the plaintiff and Dr. Collie. The learned counsel added that Dr. Collie, though he was not a party to this action, entirely acquiesced in this view of the case. Moreover, Dr. Collie was perfectly willing that all matters in dispute between himself and the plaintiff should be referred to arbitration, the arbitrators to be appointed by the council of the union under the articles." We entirely agree with the expressed opinion of the Judges that the course which has been taken by the defendants is a very proper one.

THE DIFFUSION OF SMALL-POX.

THERE were again 16 cases of small-pox in London last week, whilst 14 patients were admitted to hospital, the close of the week finding 56 persons under treatment in hospitals of the Metropolitan Asylums Board and 25 in Highgate Small-pox Hospital, a total of 81 against 85 in the week preceding. No deaths from the disease were registered, 11 having, however, been registered during the quarter. There were 5 deaths during the week in West Ham, where 30 cases were recorded, 8 other cases arising at Leyton. Bristol had 8 cases also and 1 death. The epidemic seems to be over at Walsall, where only 2 cases were heard of. Worcester had 5 cases; Birmingham showed a decrease with 69 cases and 3 deaths; Aston Manor had 17 attacks. Six cases occurred in Oldham. Several towns had attacks ranging in number from one to three.

THE ROYAL COMMISSION ON LABOUR.

THE Press Association gives a forecast of the report on the employment of women which the Royal Commission on Labour is about to publish. In reading over this account it seemed as if we were reading a summary of the numerous special reports on Sweating published by THE LANCET, and which led to the appointment of the Parliamentary Commission on Sweating. We read a repetition of the facts then disclosed, and the report of the Royal Commission travels over the same ground and mentions especially the same towns—i.e., Birmingham, Liverpool, Manchester, Glasgow—and the Cradley Heath nail and chain makers. Our first report on this subject related to the Jew tailors in the East-end of London and appeared on May 3rd, 1884. Then, when in 1888 a Parliamentary Commission was appointed to inquire into sweating in the East-end of London, we urged that the investigation should be extended to the provinces, and in the spring of that year commenced our own inquiry at Liverpool and Manchester, proceeding afterwards to the other towns just mentioned. We then pointed out what is now repeated in the Royal Commission's report, and it is very satisfactory to find that the grievances we denounced six years ago are now being confirmed by so high an authority. It would have been more gratifying if in that lapse of time more energetic measures had been taken to check these evils; nor can we be otherwise than impatient when we reflect that delay involves the loss, on a wholesale scale, of human life. The report also alludes to the hardships endured by shop assistants and the length of the hours worked. On this subject we more recently published a report which put all the principal points forward in a forcible manner.[1] The Commissioners insist on the same sanitary defects against which we protested—viz., the absence of separate sanitary accommodation for women, the want of proper ventilation, and the heat, moisture, and dust, that

[1] THE LANCET, Feb. 27th, 1892.

render the want of fresh air especially injurious. The Commissioners, we are glad to note, do not think that these are inevitable evils, but, on the contrary, maintain that proper sanitation and ventilation could be enforced. Why are they not enforced? Perhaps because public conscience is not sufficiently keen on these subjects? Let us hope that the large publicity given to the Commissioners' report will help to rouse that still small voice, and that the nation at large will at last understand how great is the extravagance of cheap production when it means unwholesome surroundings and injury to health.

PUPIL TEACHERS OF CRICKET.

IT is now pretty generally acknowledged that, notwithstanding an occasional mischance of accident, no kind of physical exercise is better suited than cricket to aid the development of healthy and manly boyhood. The position occupied by the national game in our school system, almost that of a subject of education barely optional to the learner, is an abiding proof of its tried utility. In some schools the mark of appreciation has reached an even higher level, as one may see from a recent advertisement which offers to boys good at cricket free education in a preparatory school and, if promising, preparation for a scholarship. The terms of this proposal certainly register a new departure in the history of pupil teaching. Whether this is entirely commendable is another question. In one respect it might prove useful—namely, in affording a few healthy, intelligent, and pushing lads, probably a minority of eligible candidates, the opportunity of obtaining a better education than they could otherwise afford. Great care, however, would have to be taken to prevent this attractive pupil-teachership from becoming a mere refuge of the schoolboy idler. Another possible evil would also have to be avoided, and that is, perhaps fortunately, a much rarer one, the possibility of overwork, resulting from a double ambition to excel as pupil in the class-room and as teacher and champion in the cricket field. Let a strong boy risk it if he will, but let another choose first the scholar's part. After all, study comes first at school, then the cultivation of muscle.

THE DOGS' HOME, BATTERSEA.

NOT only on the ground of humanity, but even more so in the interest of public health, we would support the appeal made a few days ago at the annual meeting of the Royal Society for the Prevention of Cruelty to Animals on behalf of the Dogs' Home in Battersea. The secretary's report of work done in this institution during 1893 is instructive. From it we learn that the total number of dogs brought to the home during the year was 17,250, an increase of 678 on the year preceding. Homes had been found for 3125 of these, 1963 had been sold, and 1162 had been restored to their owners. No rabid animal had been found among the arrivals for nearly four years. The additional department for cats had accommodated 417 inmates—215 as "boarders" and 202 as "strays." Let us now ask ourselves what is the real meaning of the above statement. We may note in the first place that it implies a great reduction of animal suffering. The home does in effect for its four-footed occupants what the workhouse does for destitute mankind: it shelters, clothes, and heals. It is, moreover, not without some commercial value, since in a measure it is self-supporting by the sale of its more presentable inmates. Last, but by no means least, in importance is the fact asserted, and with truth, by its secretary, that the institution has exercised a decided influence in the repression of the once prevalent scourge of hydrophobia. It is well known that the germs of this disorder find the most suitable soil for their development in animals whose vital resistance has been lowered by neglect and starvation. The nurture and restoration to health and vigour of any such, or, if needful, their destruction, are from a sanitary standpoint the chief purposes of the home; while it is maintained, therefore, we may count with confidence on the abatement of a great public danger. The reasons above given should furnish an ample justification of the claim for support now put forward on behalf of this useful institution, the expenses connected with which have increased by £174 during the past year, chiefly in consequence of an increase in the number of its canine inhabitants.

FEMALE LABOUR AND INFANT DEATH-RATE.

IF we may judge from the statements made by Dr. George Reid, medical officer of health to the Staffordshire County Council, in a recent paper on Infant Mortality and the Employment of Married Women in Factories, there exists in certain manufacturing centres a relation between death-rate and occupation hitherto imperfectly, if at all, recognised. Against a total of 97 infant deaths in the rural counties there are 169 in the mining counties and 218 in three towns where a census of the kind in question was taken. Where no women were employed in factory labour the infant death-rate was 152; where some women were so employed it was 166; in others where female labour was much in demand it reached 195. Another instructive parallel was that drawn between arrests for drunkenness and deaths from suffocation in Liverpool. On Saturday night, it appears, the maximum in both is usually recorded, Monday holds second rank, and the rest of the week shows a fall. These observations are instructive. They confirm conclusions already drawn and proved by experience as to the relation between drunkenness and overlaying of children. They suggest, if they do not as clearly prove, a similar connexion between child mortality and conditions of labours, which, however, necessarily tend to draw the woman out of her proper sphere of home, to place her in the labour conflict and to expose her to the passions and temptations to indulgence engendered by reaction in that struggle. How to adjust conditions of work so as to retain her in the domestic circle is a problem we cannot pretend to solve, but the facts above stated tend to show that it is not unworthy the attention of the employer of labour as well as the social reformer.

THE ANNUAL MEETING OF THE BRITISH DENTAL ASSOCIATION AT NEWCASTLE.

THIS meeting was well attended, notwithstanding the time of the year, and papers of considerable interest were read. Mr. W. H. Breward Neale, the retiring president, dwelt largely on the politics of the dental profession and the good feeling which now existed between dentists and the medical profession generally, which he fervently hoped would be continued and increased. The treasurer (Mr. W. H. Woodruff) gave a satisfactory financial report. The president, Mr. Charles Tomes, F.R.S., who was enthusiastically received, spoke of the history of the association, and said that, counted in years, it was very young—only twenty-one—and yet members were inclined to "clamour for a degree of consideration which can only be accorded in the fulness of time, if ever." He mentioned the great strides which had been made in the requirements by legislative boards from dental students, and alluded to the patience, tact, nerve, and physique requisite to ensure success in practice. A question which has for some years been discussed in dental circles—viz., that of the advisability of "apprenticeships"—was warmly debated, with the result of a majority in favour of the old *régime*, but the *pros* and *cons* of this point are too many to go into here. The demonstrations were interesting, but there was nothing very new in dentistry. Mr. Wardell, Mr. Oswald Fergus, and others showed various methods of treatment and mechanical

devices. A Microscopical Section, under the presidency of Mr. Howard Mummery, was a new and successful departure. Mr. A. B. Barker's paper on the Treatment of the Dental Pulp showed much thought. Dr. F. W. Hewitt demonstrated with a new apparatus the possibility of obtaining, with very little more trouble than when giving ordinary nitrous oxide gas, a transient form of anæsthesia. The social entertainments were as cordially received as given.

THE INDIAN OPIUM COMMISSION REPORT.

THE British members of the Opium Commission will shortly assemble in London with a view to agreeing upon the terms of their report. The appointment of this Commission was considered unnecessary in India, and the people of that country were very naturally opposed to bearing any part of the expenses attending it; but now that the investigation has taken place it has come to be generally regarded as a good thing. The inquiry has been of a very full and searching character, and it is understood to have carried conviction to a large majority of the Commission. There can be no doubt that the result of the inquiry has been to show that the statements in which the anti-opium party has indulged have been misleading and exaggerated, and, in some respects, unfounded and contrary to fact. There has been a remarkable degree of unanimity on the subject among those witnesses who have had the best opportunities of judging of the effect of the use of opium and among the natives of India. The medical evidence, the evidence of the natives themselves, and that of officials, have gone to show that, with rare exceptions, opium eating as practised in India is not productive of disease, and that any attempt to prohibit its use would give rise to great discontent and be productive of injury, and only lead to the use of alcoholic stimulants and other agents with far worse and more deleterious results. Nor is it likely that any minority report can have any real effect in decreasing the weight of the general testimony in favour of this view and the impression it has made on the public mind.

THE general meeting of the subscribers to the Dr. Dickinson testimonial fund will be held in the board room of St. George's Hospital on Tuesday, April 10th. H.R.H. the Duke of Cambridge has consented to preside on the occasion and will take the chair at noon. The subscription list will be kept open until April 10th, and intending subscribers should communicate before that date with either Mr. Laurence Read (hon. treasurer) at 11, Petersham-terrace, S.W., or Mr. Gerard Carré (hon. secretary) at 1, St. George's-place, S.W.

IN our list of candidates for the coronership of North-east London we regret to have over-looked the name of Dr. F. H. Daly. Dr. Daly holds the qualifications of M.D. Q.U.I., and L.R.C.S., L.M. (Edin.) and is a J.P. for the County of Middlesex.

THE HERMITE PROCESS AT WORTHING.

AT a meeting of the Worthing town council on Tuesday last the mayor, Alderman Piper, being in the chair, Alderman Cortis, chairman of the sanitary committee, submitted a lengthy report from Dr. Kelly, medical officer of health, upon the Hermite treatment of sewage. Dr. Kelly expressed the opinion that, so far as the late trials had gone, the process had failed to produce the results claimed for it by its inventor. Alderman Cortis, in referring to the report, said that Dr. Kelly had taken an immense amount of trouble and had done his duty in a thorough manner. A letter was read from Mr. Cooper, the electrical engineer, who represents M. Hermite and is in charge of the experiments at Worthing, stating that his attention had been drawn to Dr. Kelly's report upon the working of the Hermite disinfecting process at Worthing, and that that gentleman's results were so opposed to those of other experts that he could only conclude that there must have been some mistake in taking the samples. It was very precipitate, in Mr. Cooper's opinion, to report upon a process of this sort from a single sample such as appeared to have been submitted to Drs. Dupré and Klein. The conclusions, he maintained, were erroneous and calculated to give an entirely wrong impression. When the process was properly investigated the results arrived at, he said, would be totally opposed to those of Dr. Kelly. The process was being investigated by several experts and authorities known to the council, and he was prepared to await and abide by their verdict. After some further discussion, Dr. Goldsmith said he should like to offer a few remarks, and he was only sorry that Dr. Kelly was not present. They would recollect that Dr. Kelly was directed by the council to take samples for investigation, have them examined bacteriologically and chemically, and make his report to the council, which he had done. He (Dr. Goldsmith) happened to be present at a meeting of the sanitary committee when it was stated that those samples were not properly taken, and in his judgment he could not satisfy himself that they had been properly taken. They ought to be taken from the tanks which supplied the closets, but one of the members of the town council had stated that he had seen a person take the samples for Dr. Kelly from tanks connected with the electrolyser at the time when the day's work had ceased and when the electrolysed sea water had been pumped into the upper tanks. It was the rule to do this when they had finished the day's work and refill the electrolyser tanks with fresh sea-water ready for the next day's work. No wonder, therefore, that Dr. Klein did not find it strong enough to destroy organisms. He did not think for one moment that these samples were taken with a view of making an unfavourable report, but that the person who selected the samples took them from the wrong tank. It was not fair to the process, either, to take a sample out of the perforated basket in the intercepting syphon, and he had heard also that the contents of the basket had been well stirred up before samples of the final effluent were taken, which of course was vitiated by sewage matter being forced into it. The essential feature of the Hermite system was that all sewage matter in the basket should be kept perfectly quiet, so that the electrolysed sea-water should gradually operate upon it and disinfect it. In the end the council decided not to publish the report for the present, those already issued being in the hands of the councillors and others in confidence.

From inquiries made in Worthing on Tuesday last our representative ascertained that Sir Henry Roscoe and Dr. Ruffer had not yet presented their report, Mr. Lunt, Sir Henry Roscoe's assistant, being still engaged in carrying out tests at the experimental station in West-street. Meanwhile our own investigation of the process is proceeding, and our Special Commissioners hope to be in a position in a few weeks to publish in detail the results which are being furnished on both bacteriological and chemical analyses.

PRESENTATION.—At a public meeting held at Thurmaston recently Mr. W. J. Spence, L.R.C.P. Ed., &c., was presented by the members of the ambulance classes with a handsome carved oak hall barometer, bearing a suitable inscription, as a recognition of his services as lecturer. All the candidates who presented themselves for examination had been successful.

ROYAL LONDON OPHTHALMIC HOSPITAL.—The annual general meeting of the governors of this hospital was held recently in the board-room, Mr. Charles Gordon being in the chair. By the report it appears that during the past year the number of in-patients admitted was 1972, that of the out-patients amounting to 24 955; whilst the attendances reached the large total of 116,775 for the period over which the report extends. As to the finances, the income was £10,688, and the expenditure £6874. Though the balance is thus shown to be favourable, yet there appears to have been a considerable falling off in the amount of the donations. The committee were able to hold out good hope of a satisfactory termination of the negotiations for acquiring a site for the erection of a new hospital, for which purpose some £30,000 was required. The business of the meeting was concluded by the election of the present officers.

THE ELEVENTH INTERNATIONAL MEDICAL CONGRESS.

ROME, 1894.

PRESIDENT: PROFESSOR GUIDO BACCELLI,

Minister of Public Instruction in Italy.

WRITING in the very middle of the Congress we are able to form a more precise estimate of its success and its organisation than we have been able to do hitherto. In point of numbers it has probably exceeded its predecessors, extending towards 9000, including ladies, whose presence has added much to the pleasure of the holiday, and who have not been altogether absent from the sections even when very abstract questions of physiology or of medical science have been under discussion. Not the least interesting physiological problem of the occasion has been the power of endurance manifested by them in doing the sightseeing in Rome, which is probably more exacting in its nature and amount than that of any other city in the world. The general and the particular arrangements for the reception and accommodation of members at an early stage of the Congress excited, perhaps, rather criticism than praise. The unreadiness of the situation was apparent at the opening reception of the members by the central committee of the Congress of the International Medico-Hygienical Exhibition. On Tuesday evening, March 27th, the crush was overwhelming, and, to judge from appearances, the admissions were somewhat indiscriminate. The inauguration on the following morning in the Costanzi Theatre by their Majesties, the KING and QUEEN of ITALY, supported by the Prime Minister, Signor CRISPI, was a much more successful business and presented a truly imposing spectacle of thousands of members in five tiers of boxes. The King stood the whole time and appeared deeply interested in the speeches that were delivered by the representative delegates of eight or ten great nations. This was not the only indication of royal interest in the Congress. We have reason to know that their Majesties have attended with much eagerness to expositions of some of the most pressing problems in physiology and medicine, well perceiving that in the future medicine will have as much to say as any other science towards the solution of questions affecting the welfare and even the survival of nations. It is gratifying in all these gatherings to note the prominence of the representatives of Great Britain and Ireland and the honour assigned to them. There are indeed at this Congress one or two conspicuous absentees—notably, Sir JAMES PAGET and Sir JOSEPH LISTER,—men that have well represented us in the great international gatherings of the past, and have fully recognised the importance of them in the history of civilisation. There are ample reasons in both instances for their absence, and it is needless to say that they were not forgotten. It would be invidious to specify the number of those who in the public addresses or in the work of the sections represent British medicine. The discourse of Professor MICHAEL FOSTER at the general meeting of the Congress on Saturday was a great success. His subject was the Organisation of Science, and he warmed with his theme to an animation that reminded his hearers rather of an Italian or a French than of a British orator. His oration was the more remarkable as it did not seem to have been written beforehand and was not read. It will be a grand outcome of these international congresses if we see Professor FOSTER'S ideas realised in some methodical international attempt to solve physiological and pathological questions bearing on human life and health. His observations on the great loss of time arising from the chaotic state of medical and physiological literature are well worth the attention of our foreign secretary, and should lead without delay to his insistence on measures for classifying references to scientific work in each country, and their transmission to other countries with a *résumé* of the chief conclusions reached by each investigator. There is the more need for us as a nation to press for such an organisation as we are hindered in many ways at home in the advancement of pressing questions in medicine and have to rely on foreign colleagues for much light as to their progress. There can be no doubt that the time saved by a well-constructed international catalogue of work already done would be well utilised in the prosecution of further research. Meantime, and pending the organisation among States as such of international schemes for promoting science and recording its achievements, much may be done by a better organisation of our present international scientific congresses. The present Congress will prove to have been a great success in spite of its defects. Those who have paid most attention to the work of the sections are most clear in reporting that the work done in them is good, and, in spite of the disadvantages of a language less familiar to most Europeans than either French or German, the keen interest with which the discussions are followed by the audience is proof of their interest; but we should miss the only use of defects in organisation if we did not note them and make suggestions for their rectification on future occasions. One matter to be noted is the desirability of holding the Congress in a more central and suitable place than that which has been chosen in Rome. The Policlinico, when finished and furnished, will be a splendid hospital—even if the site of it be somewhat doubtful—such as we could scarcely hope to raise in London either on the voluntary principle or by grant from the CHANCELLOR of the EXCHEQUER; but it is at a distance from most of the hotels, and the connexions are not nearly

so complete as they should be. Another point we would insist on is that before the Congress meets there should be some sifting and selection of the communications made, and that abstracts of those chosen should be made in the four or five principal languages, so that each member in his own tongue should be able to know beforehand the points of each paper. Then, again, it is desirable that at the close of each speech the gist of it should be conveyed by an appointed interpreter in one chosen common language, if not more; further, on the morning after the conference a reasonable outline of the discussions of the previous day should be supplied free to the members. It should be possible, too, to give some idea at the outset of the day on which any paper or demonstration of special interest will be taken. These may seem simple and obvious suggestions, but they have not been acted on in the present instance, and the result has been, as we have said, that a certain want of interest in the proceedings of the Congress has been evinced by some of the members. But it would not be fair to put down all the want of interest in the proceedings of the Congress and its sections to defect of organisation. It is only fair to recognise that much was due to the exceptional nature of the place and to its historical interest, many persons wishing to visit Rome at Easter-time having contrived to become identified in some way with the Medical Congress and with the facilities for going to Rome; and some of the most ardent members of the profession have succumbed to the predominant charm of the city and its monuments. With all its defects the Congress at Rome will live vividly and pleasantly in the memory of its members, and will conduce, as its predecessors have done, to the stimulation of scientific research and the improvement of the resources of practical medicine.

The sectional work of the International Congress was begun on Friday in the magnificent new palace, the Policlinico. The Policlinico is still unfinished, but is practically out of the builder's hands, so that it is difficult to understand why the Minister of Public Works should have estimated last summer[1] that four years were likely to elapse before the building could be considered really complete. It is a really colossal building, though undoubtedly its construction in separate pavilions lends it an increased appearance of size. For British followers of the science of medicine the *basso-rilievo* on the pediment of the building styled the Royal Institute of Clinical Surgery has a particular interest, as it represents with considerable classical licence of detail Sir Joseph Lister in the operating theatre.

A volume will be published in a few days of very special interest, entitled "The Italian School of Clinical Medicine." It is a publication which will form the archives of clinical medicine of Italy, and will contain a report compiled by the various professors of the Italian medical clinics of the most important works and researches of the directors of the medical schools of Italy. The contents will include articles from Baccelli, Bozzolo, Cantieri, Giovanni, De Renzi, Fenoglio, Galvagni, Maragliano, Queirolo, Riva, and Tomaselli. The volume will contain besides a study on the three most distinguished medical men of recent times in Italy—Coneato, Tommasi, and Cantani. The conception which has inspired the preparation of this volume, which will put *en évidence* the researches of the modern school of medicine in Italy, is equalled by the importance of the works which it will contain, not the least being that of Baccelli.

[1] THE LANCET, July 1st, 1893.

A visit to the New Military Hospital, situated about half a mile distant behind the Colosseum, well repays the visitor. Accommodation is provided for 500 patients and the sanitary arrangements are all that could be desired. The instrument room contains a most complete collection of surgical instruments arranged in air-tight cabinets on glass shelves, so that the instrument wanted and its condition can be immediately seen. Effective means of sterilising the instruments, both before and after use, are provided. The arrangement of the operating-room is very complete. The chamber is constructed on modern principles, almost entirely of glass and iron. The table itself is of iron, and above it are arranged pipes for the purpose of conducting to the surgeon's hand hot and cold water and various medicated solutions. There is perhaps no operating-room in England so perfect in detail and so fitted by its simple principles of construction for the carrying out of aseptic surgery. The post-mortem room also deserves attention. From the under portion of the perforated tables on which the corpse is placed a large tube passes to a furnace outside the wall. When the furnace is lighted it is evident that even in the hottest weather all offensive odours will be drawn away from the operator. After the necropsy has been completed the body is placed upon another table, which can be lowered into a room below, where the body is prepared for burial.

With reference to the enormous increase in the population of Rome, Dr. David Young gave some figures in the March number of the *Medical Magazine*, which show that the census at Rome has from the earliest times in history been remarkably inconstant. The first census taken A U C. 186 showed the population to have been a quarter of a million, or exactly what it was twenty years ago. In the Augustan era the population rose to over a million and a quarter. Three centuries later it had fallen again to little above a quarter of a million. Through the Middle Ages it declined, until its inhabitants numbered towards the end of the fourteenth century but 17,000. But at the beginning of the nineteenth century it stood at 150,000, and though the Napoleonic wars were attended by a sensible decrease twenty years ago the population was again what it had been in the times of Servius Tullius, a quarter of a million, and now it approaches double that number.

"In commenting last week upon the paucity of English exhibitors at the Exhibition of Medicine and Hygiene in connexion with the International Medical Congress," writes our Special Correspondent at the Congress, "I enumerated the names of English firms which had attracted my attention, but in doing so omitted to mention Messrs. Oppenheimer, Son, and Co. Their exhibition has attracted considerable attention at the Congress."

Not the least interesting event in the history of the present International Congress was a dinner given by the President, Professor Baccelli, Minister of Public Instruction, on the evening of April 1st, at the Sala Umberto I., Via della Mercede. There were present, besides the President, Signor Crispi, the Mayor of Rome, M. Colin (the Medical Inspector-General of the French Army, &c.), Dr. Stokvis, Sir William Mac Cormac, Sir Dyce Duckworth, Mr. Makins, and many other distinguished members of the profession. The speeches were interesting and important. Signor Crispi spoke first and drank to all nations of the earth peace and prosperity. Dr. Baccelli, in an animated speech, spoke of the Congress as an assembly significant of universal concord, bringing its labours and diligence to bear on the good of society. He paid a high compliment to Signor Crispi, the great

promoter of their liberty and their security. M. Colin spoke with warmth and with much acceptance in favour of a good understanding between France and England. Dr. Stokvis, one of the best linguists and best physicians of the Continent, made an eloquent speech in Italian, ending with a warm tribute to Signor Crispi and a wish for the continued prosperity and unity of Italy.

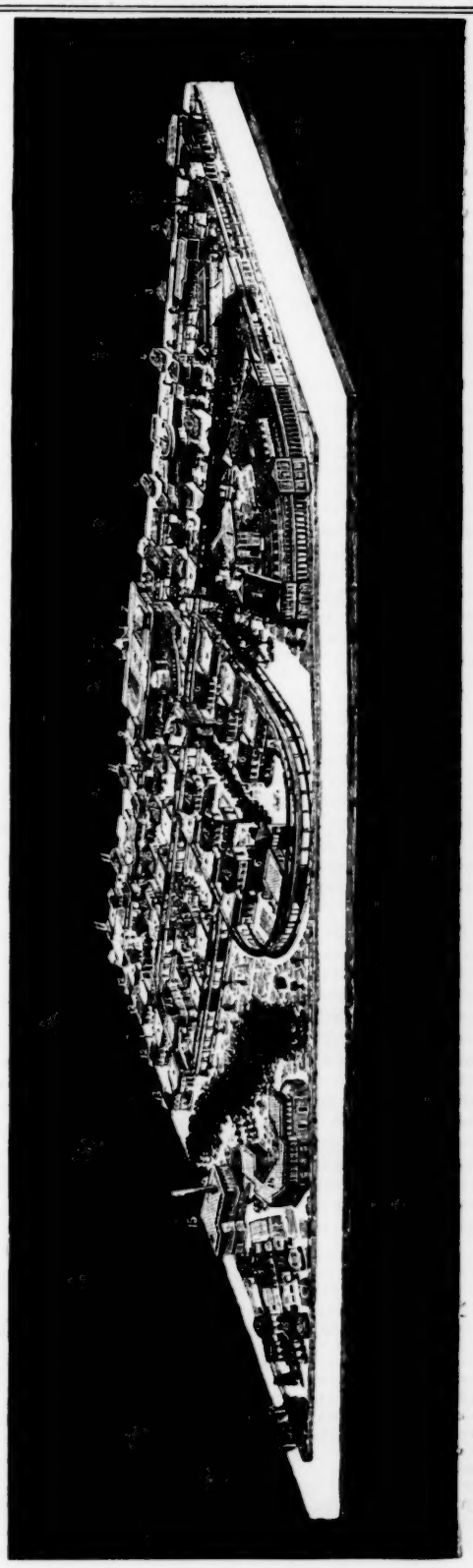
Many papers have been read which we would willingly reproduce in our columns if space allowed. Among others which have attracted attention mention should be made of a communication from Professor v. Ziemssen of Munich on the Transfusion of Blood, and one from Dr. Menella on the Treatment of Phthisis by Inhalation of Mint Essence and the Application of Liniments of Mint and Creasote. Dr. Menella claimed to have met with practical success.

At the plenary sitting on Saturday, March 31st, Professor Michael Foster read a paper on the Organisation of Science, in which he advocated the institution of some international form of coöperation between the scientific workers of different nations, so that workers in different countries on the same subjects might get into early communication with each other to their mutual benefit. In view of the success now attending a congress that is the outcome of international coöperation, Professor Michael Foster's hopes must not be dismissed as Utopian; while it needs no consideration to see that the adoption by the advanced nations of a system of common nomenclature, and the foundation of a bureau of scientific literature which would admit the appearance in a single tongue of all the monographs relating to a single topic or branch of science, would be of incalculable benefit to workers. The other most noticeable address at the plenary sittings—that of Professor Virchow—we print in full.

A medal has been struck at Rome in honour of the Congress. The design emanated from Dr. L. W. Sambon, who discovered in his magnificent collection of Roman coins a piece bearing the portrait of the Emperor Antoninus on one side and on the reverse a design that, despite its ancient date, is curiously apt to the present occasion. The River Tiber, personified, is pictured greeting the representatives of foreign medicine on their arrival with Æsculapius from Epidaurus, the city in the Peloponnesus where Æsculapius was worshipped. The story may be familiar to all; it has recently been recalled to the memory of our readers by Dr. Steele's Alcaic ode to Professor Baccelli. The Sibylline books having been consulted on the occasion of a plague at Rome, it was decided to procure the aid of Æsculapius from his island. An embassy was sent to solicit the favour, and the God of Medicine came in the form of a serpent (Ovid, Metamorph. xv.) and was landed on the Tiberine island. Here the temple of Æsculapius, which was the first Roman hospital, was erected.

On Sunday evening the Minister Baccelli gave a banquet to the principal Congressisti, among whom were Blanc, Morin, Ferraris, Mocenni, Calenda, Boselli, Ruspoli, Caetani, Finali, Conti, Costantini, the Prime Minister, the President of the Council, Sir Dyce Duckworth, Sir William MacCormac, Dr. Glover, Mr. Makins, and all the principal guests, with Virchow at their head.

A meeting was held on Monday, April 2nd, at the house of Dr. Blasi, President of the Section of Pediatrics, to deal with proposals for the formation of an International Pediatric Association, and to invite representatives from the various countries. One of the objects of the Association would be to improve the existing arrangements for instruction in the diseases of children. Dr. Thomas Barlow was appointed delegate for England at the meeting.



BIRD'S-EYE VIEW OF THE POLICLINICO. (*Reproduced from "Gazzetta degli Ospedali e delle Cliniche."*)

Professor Fraser of Edinburgh read a paper to the Section of Medicine on the Effect of Bone Marrow in cases of Pernicious Anæmia, which attracted considerable attention. He gave particulars of a case in which at the beginning of the disease the hæmatocytes numbered 1,000,000 per cubic millimetre and the hæmoglobin 25 per cent. After a month's trial, first with iron, then with arsenic, afterwards with salol, no appreciable improvement was manifested. At the end of that time bone marrow was administered with remarkable results. The patient gradually improved, and in two months the blood had a composition of 4,000,000 hæmatocytes and the hæmoglobin had risen to 80 per cent. This case shows, so far as any single case can, that in bone marrow we may perhaps have an effective remedy for what has hitherto been practically held to be an incurable disease.

The Royal Garden Party was held on Monday afternoon, April 2nd, in brilliant weather. Invitations had been issued mostly to the usual *habitués* of the Quirinal, and on this occasion a relatively small number of the celebrities of the Congress were presented with tickets enabling them to attend. The King and Queen received their visitors personally. There was dancing to the music of an excellent band. The English present were but a handful. Among those present were Sir Spencer Wells, Sir Wm. MacCormac, Drs. Lauder Brunton, Ferrier Hare, Abraham, and Withers Moore; also Surgeon-General Cunningham from India, Professor MacEwen from Glasgow, Professors Fraser and Simpson of Edinburgh, and Professor Finny and Dr. Duffey from Dublin.

On Monday some of the leading members of the Section of Surgery were invited to visit the wards of Professor Durante at the Clinica Chirurgica in Trastevere, on the right bank of the Tiber. Amongst those present were Sir Spencer Wells, Sir William MacCormac, Professor Macewen, Sir W. Stokes, Professor Kocher, Professor Mikulicz, and others. This hospital, as its name implies, is entirely devoted to cases of a surgical nature. It contains sixty beds, all at the disposition of Professor Durante, and is well fitted with every requisite for pathological research.

Professor Durante performed an operation before his guests for the removal of a calculous kidney. The kidney was exposed by an oblique lateral incision, and, being felt to be cystic and calculous, it was aspirated and the cystic cavity distended with sublimate solution, which was allowed to escape again. Adhesions were freed with raspatory and knife, and the pedicle was seized with a clamp and divided. Several catgut ligatures were then applied to the stump, the divided end of the ureter was touched with the actual cautery and dropped into the cavity (extra-peritoneal) formerly occupied by the kidney. This space was thoroughly dried, but not stuffed or drained in any way, and two layers of sutures were inserted, a deep one of catgut and a superficial row of silver wire and silk. The wound was dressed with sterilised gauze impregnated with sublimate solution.

INAUGURATION OF THE CONGRESS.

We were enabled last week to print the gist of the speeches by Signor Crispi and Professor Baccelli at the opening ceremony, as we received them by telegraphic despatch: we now give a translation of Signor Crispi's speech at greater length. "Italy, through me, salutes you from her heart. It is a grand thing for Italy to welcome in her capital an assemblage representing so much wisdom and experience. The science of life, of which you are the high priests, awaits from you new conquests and new revelations. Your mission aims in two ways at doing good to humanity: by preventing disease and by its cure. To the former end you employ hygiene, which preserves the health of mankind through the purification of our environment—of earth, air, and water; to the latter medicine, designed to fortify and alleviate. Thanks to your efforts, many cities once unhealthy now flourish, and regions once the seat of all insanitation have been transformed into lovely gardens. The words that you will speak here will be heard with reverence and respect and followed with sympathetic attention. Of the Eternal City we and you are all citizens. Rome, mother of us all, gave to the ancient world its education and its laws, and from Rome to-day will go forth, thanks to you here assembled, words to meet the necessities and inspire the hopes of modern times. Peace is assured by this world-wide Congress—a symbol of the brotherhood of the assembled nations. In this faith I invite you all, in the name of his Majesty the King of Italy, to commence your work."

After Signor Crispi came Professor Baccelli, whose speech we give in the original Latin as it was delivered:—"Postquam Italia universa in unum corpus iterum coaluit et sui juris fuit, præclaris benevolentiæ atque honoris testimoniis idemtidem gaudet, vel in maximis difficultatibus quæ novam exordientis vitae civilis rationem necessario comitantur. Anno superiore, in festis genuensibus, totius pene orbis gentes loricatas naves miserunt, quæ Cristophorum Columbum, italicum civem, merito honore decorarent. Hodie viros Romam mittunt biologicæ doctrinæ peritissimos ut vincula arctius constringant, quæ communis utilitatis causâ nos jungunt. Hi Romam petunt, fortasse non immemores, spectatissimos olim cives politica medicina animum excoluisse, quam antiqui reipublicæ rectores tanquam nobilissimam virtutem exoptarent: de quo Tullius et Cato abunde testantur. Salvete igitur, clarissimi viri! Classica hæc regio libens Vos excipit ubi divinus libertatis halitus verterem gentis magnitudinem reducet. Hic nemo habetur extraneus. Hic ubi omnis terræ pars sua monumenta invenit, omne hominum genus unam tantummodo familiam constituat. Unisquisque consilio et opere, populorum incolumitati, hominumque valetudini prospiciat. Tunc memorabiles patrum latinorum sententiæ per Vos novissima luce nitebunt, 'Salus populi suprema lex esto' et 'nulla re magis homines ad Deos accedere quam salutem hominibus dando.' Hospites doctissimi, iterumque iterumque salvete! Humbertus et Margarita, regiæ virtutis exemplaria, honoris causâ vobis intersunt. Hic adstant supremi rerum italicarum moderatores; adstant qui vice funguntur Senatus et Oratorum popularium legibus ferendis; adstant Municipiorum curatores; tota civitas conspectu vestro gaudet et vobis plaudit. Ego vero singulari lætitie perfundor quod Regis voluntate ac nomine mihi liceat dicere—Undecimum omnium gentium de medicinâ conventum, hodie, Roma auspicatur."

Principe RUSPOLI, in the name of the Syndic of Rome, then said: "In the name of the City of Rome I salute you affectionately and in so doing am convinced of the support of all my fellow citizens. Physicians have ever been greatly esteemed by us, from the time of Augustus, who proclaimed them freedmen of Rome, and both at court and in camp they have always held highly honourable positions. In Rome was held the first Medical Congress, and in Rome was initiated the first battle between science and prejudice. This—the Congress held in the days of the Cæsars—was annulled by the masses with the words *nil mutandum*. But all is now changed, and the light of truth and science illuminates the world. Our illustrious citizen, Guido Baccelli, at the last Congress at Berlin, invited you all to Rome, and I, in the name of the city, thank you for so heartily responding to the invitation. Let us join together in aspirations towards liberty and progress and peace.

The President of the last International Medical Congress, Professor VIRCHOW, then read in Italian the following discourse:—"Sire, Most Gracious Queen, Signor President,—I owe the high honour of addressing this meeting to the circumstance that I, as President of the last International Medical Congress, have seemed the most fitting person to expound the sentiments which induced that Congress to choose the city of Rome as the seat of the present one. Everyone at that meeting in Berlin remembered that the whole West of Europe, and so the whole civilised world, must honour Italy as the country of "The Renaissance," and that, among all sciences thus new-born, it was in medicine that Italy during long centuries was most famed as a centre of instruction and the asylum of progressive discovery. Amid all the struggles in this country, civil and international, there were never wanting vigorous men full of hope, who held obstinately in view the grand

aims of science; and then arrived the new era, the creation of the great Italian state, and under this unification the foundation of numerous scientific institutes and the formation of Italian physicians into the great league of universal medicine. The last international congress, by selecting for the next the Eternal City, recognises Rome once more as the capital of a great nation, rendering homage both to its ancient traditions and its new splendour. In saying this I express the sentiments of my German colleagues, who have approved them practically by coming here in such numbers. This concourse must prove to the Italians that the old enthusiasm which attracted the men of the north to the smiling countries of the south still prevails. You medical members of the Congress here assembled are the born defenders of humanitarian thought, accustomed to subordinate your convenience to the appeals of charity, and to seek to further progress by disinterested coöperation, you, as obviously as those other disciples, are destined to be the messengers of peace and charity; and every new international congress reinforces your solidarity and augments your zeal in the search for unity of method in the removal of the obstacles to the well-being of human society. May this Congress contribute to truth, to the intensity of our moral aspirations, and strengthen the links of fraternity among the physicians of all nations.

The General Secretary, Signor MARAGLIANO, then read a short report giving a summary of the number present. Scientific communications to the number of 2700, he said, had been received, with which he had found it almost impossible to deal. "Thirty-two governments and 425 scientific bodies have sent their representatives, and more than 1000 ladies connected with medical men have met here from every country. All this is due to the coöperation of the thirty-five committees in every part of the world and of the other 115 committees formed in the different Italian towns. It is to the joint activity of these that the success of the meeting must be attributed."

The following national delegates then returned thanks for the cordial welcome:—Vogl for Austria, Crocq for Belgium, Salomonsen for Denmark, Bouchard for France, Köhler for Germany, Laache for Norway, Roche for Portugal, Sklifossovsky for Russia, Holmgren for Sweden, Fernandes Caro for Spain, Kocher for Switzerland, Salih Bey for Turkey, and Csatary for Hungary.

Sir WILLIAM MACCORMAC spoke as the representative of England in the following terms: "Your Majesties, M. le President, Colleagues,—I represent at this imposing ceremony the English members. Assuredly I speak the sentiments of every one of them when I say we are delighted to be present in the glorious capital of your beautiful Italy, and to share the work of this great scientific congress. We come to Rome with the keenest pleasure, as we know what high rank Italy has taken in the scientific progress of the world. We are welcomed here by a great physician, Professor Baccelli, our President, and one of a long line of great physicians. He is, besides, a physiologist, a Senator of Rome, and one of your Majesty's trusted Ministers. We know the great and good work of Tommaso Crudeli, of Golgi, of Marchiafava. We know the good surgery of Postempski and of Durante, who first removed a tumour from the brain, and of many others. Lastly, we know the interest your Queen has graciously taken in this Congress. In the name of my countrymen, therefore, and, I am sure, I may add my countrywomen, we thank the great Italian nation. Viva il Re d'Italia. Viva la Regina. Viva la sua Eccellenza, il Presidente del Congresso Medico di Roma."

Signor BACCELLI then read congratulatory telegrams from Fodor and Müller, president and secretary respectively of the eighth International Congress of Hygiene and Demography, to be held at Budapest; from Baranowsky, president of the Medical Society of Warsaw; from Czerny of Heidleberg, and from Ewald of Berlin.

The King, who remained standing during the whole of the proceedings, then stepped forward and received the national delegates mentioned above, and the proceedings then terminated.

Professor Sir Joseph Lister has sent the following letter to Professor Baccelli:—

"Park-crescent, Portland-place, London.

"Most Illustrious Professor,—

"After the great honour which your classic city has done me, on the proposal of Professor Durante, by adorning with my effigy your new Surgical Clinic, it would naturally be not only a duty, but a great pleasure, for me to be present at the Congress over which you will preside, and to return personally my best thanks, whilst paying you the homage which is due to your merits. But the terrible shock which I have undergone through the loss of my beloved wife has deprived me of all courage for such an enterprise.

"Therefore, dear Baccelli, please accept my excuses and at the same time my best congratulations for the honor done to us by your Sovereign, who has entrusted you with the Ministry of Public Instruction.

"My heart will be with you in the Congress, to which I make the most heartfelt wishes for a brilliant success.

"Your friend and admirer,

"JOSEPH LISTER."

THE SECTIONS.

THE sectional work of the Congress began on Friday, March 30th, and at nearly all the Sections the halls were crowded with eager and attentive audiences.

SURGERY AND ORTHOPÆDIC SURGERY.

A formal meeting of this section was held on Friday, March 29th, when the office-bearers were appointed from the British representatives. Sir Spencer Wells, Sir W. Stokes, and Professor Macewen were nominated presidents, and Mr. Noble Smith (London) and Dr. David Newman (Glasgow) were elected honorary secretaries. The arrangements of the subjects to be discussed were fixed as follows:—March 30th, Cerebro-spinal Surgery; March 31st, Abdominal Surgery; April 2nd, General Surgery; April 3rd, Surgery of Bones and Joints; April 4th, Genito-urinary Surgery.

Cerebro-spinal Surgery.

Professor PÉAN occupied the chair, and, in the absence of Professor Macewen, Dr. LUCAS-CHAMPIONNIÈRE opened the debate by showing the members of the section the good results which may be obtained in the treatment of real epilepsy due to traumatic causes as distinguished from those effected in the Jacksonian form of the disease, of which the following is a brief summary:—

Clinical Note on the Results of Sixty-four Cases of Trephining.

Dr. LUCAS-CHAMPIONNIÈRE, surgeon to the hospital of St. Louis, communicated an interesting paper on this subject, of which the following is a brief summary: "Cranial surgery," he said, "has made so much progress in our time that the publication of even curious cases has lost much of its interest. The collation of the results obtained during a long period of time has, on the other hand, appeared to me to merit the very attention which isolated cases no longer obtain. My experience in cranial surgery now extends back over exactly twenty years, the date of my first successful case having been 1874. During these two decades I have operated upon sixty-four cases. Of these, ten fall under the head of recent injury, and the remaining fifty-four were operated upon for cerebral disease, either without injury to the skull or succeeding upon such injury. The method that I have employed during many years in opening the skull-cap is simple and, I consider, gives the minimum of nervous exhaustion possible. The opening is first made with the crown of the trephine and then enlarged in any desired direction by straight or curved pliers. I know no other way in which the correct dimensions in all directions can be obtained so quickly and satisfactorily, or which seems to yield better conditions for healing. My ten cases of operation for direct injury have given me most satisfactory results, only three deaths having occurred where the patients operated upon were in a desperate condition. I have also been enabled to save the lives of patients whose state appeared to be just as desperate, and one of these was living nineteen years after the operation. My fifty-four cases of operations where the condition had not followed upon direct injury have demonstrated to me in a yet more striking fashion the benefits that may accrue from trephining. It is true that I have had to reckon with seven cases of death, but I would remark that in the only two cases where the period of survival was very short the cerebral lesions were very gross. In cases of coarse cerebral lesion the operation is also additionally grave because of the shock to which the patient is submitted. The reasons for operation in these fifty-four cases should be subdivided as follows: For true epilepsy, 14; for Jacksonian epilepsy, 12; for cerebral symptoms, such as vertigo, headache, and buzzing in the head, 6; for different palsies, 22. The operations for true epilepsy have given me good results. I have been able in some cases to follow cures

apparently sufficiently pronounced over a long time; in one case over two years. In twelve cases out of fourteen I have observed amelioration in different degrees, and in more than half the cases to a very satisfactory extent. In two cases only have I had no apparent result, and in one of these there was a short period of epileptic insanity following the operation. These cases of traumatic epilepsy have given me three very good cures and three somewhat mediocre results, but no deaths. With regard to the cases where trephining had been undertaken for the relief of symptoms, pain is the first symptom indicating an operation. The symptom of vertigo has also given me good results when trephining has been large in extent and repeated. Among other lesions where the operation has done good I should mention a case of limited cerebral hæmorrhage, a case of osseous tumour of syphilitic origin, and, above all, certain cases of diffuse peri-encephalitis of traumatic origin. These last cases are particularly interesting, for the symptoms which follow upon certain cerebral traumatisms are in every way so similar to those of general paralysis. In these cases operative intervention may arrest the ill and if undertaken in good time may definitely heal the patient. They demand a very large trephining. I have made openings of seven centimetres by eight centimetres, with an opening equally large in the dura mater, and have incised on the surface of the brain, and with these cases I have always had a good result. This fact naturally gives rise to the idea that certain forms at least of general paralysis are destined to fall into the domain of surgery."

Professor MACEWEN, after making a short communication on the subject of cerebro-spinal surgery generally, formulated his conclusions as follows: (1) that all abscesses of the brain are formed subsequently to a primary focus of infective disease situated elsewhere; (2) that the chief infective foci are formed in connexion with middle-ear disease; (3) that abscesses of the brain originating in middle-ear disease are generally in direct contact with the primary source of infection; (4) that such abscesses are generally best reached in the first place through the mastoid antrum; (5) that the mastoid antrum is most easily opened through the supra-mental triangle, from which the whole tegmen antri and tegmen tympani may be exposed; (6) it is necessary to remove the whole infective tract; and (7) after this has been done the skull is trephined over the temporo-sphenoidal lobe of the brain.

Drs. Masse, La Vista, and D'Antona discussed the points raised by Professor Macewen.

Dr. D'ANTONA read a paper on Resection of the Trigeminal Nerve, and carefully described the changes produced by impaired innervation upon the tissues supplied by the nerve.

Abdominal Surgery.

Saturday was devoted to papers upon abdominal surgery. The most important British contribution was from Mr. Mayo Robson (Leeds).

The Surgery of the Bile-ducts.

Mr. MAYO ROBSON also presented a table of all the operations which he had performed on the gall-bladder and bile-ducts, eighty in number. The operations included cholecystotomy, cholecystectomy, cholecystenterostomy, choledochotomy, cholelithotrity, and explorative procedures. Where an operation had been performed for gall-stones, whether with or without jaundice, all the patients had recovered except one, on whom choledochotomy had been performed, and in that case an accidental tear of the bowel in separating adhesions, so small as to be unnoticed at the time of operation, had led to the unfavourable termination at the end of a fortnight. This experience led him to say that he believed operations on the gall-bladder and bile-ducts, if performed with due skill and with antiseptic precautions, to be not only among the most satisfactory in their ultimate results, but among the safest of the major operations of surgery. He made some remarks on diagnosis and said that the differentiation of cholelithiasis and malignant disease needed more carefully working out, but that great progress had been made recently, and he dwelt on certain groups of symptoms which he thought would nearly always enable a correct diagnosis to be made. He did not advise sounding as an aid to diagnosis, or aspiration of a distended gall-bladder as a means of treatment, as he believed that both measures were attended with more danger than a small exploratory incision. After stating the indications for the several operations on the gall-bladder and bile-ducts, he mentioned the various complications which he had met with. For calculi impacted in the ducts he preferred to crush the stones *in itu* when they were soft enough to permit of it, only performing choledochotomy in cases where cholelithotrity could not be accomplished. He had performed cholecystenterostomy three times in the last two cases, employing his decalcified bone bobbins, which he described as being both expeditious and efficient. In cases of distended gall-bladder associated with jaundice and malignant disease his experience was not favourable to operative interference, on account of the increased tendency to shock and to hæmorrhage.

Hypospadias; Cystitis.

Dr. E. LOUMEAU, Professor of Anatomy at the School of Fine Art, Bordeaux, communicated a long and careful paper on the Surgery of the Urinary Passages. He spoke first of abnormal congenital openings in the lower portion of the urethra, subdividing hypospadias into its various forms. He then proceeded to discuss the treatment of painful cystitis in the male and advocated strongly hypogastric drainage of the bladder. He described several cases in detail, and in each case the pain had been relieved by this method; but he allowed that it had inconveniences, for sometimes the bladder could not tolerate the presence of the catheter. In such cases a short and rigid cannula might be employed. He showed a belt with a urinal attached, which would enable a patient to walk about with a catheter permanently inserted in the bladder.

Treatment of Some Form of Stone in the Bladder by Perineal Lithotrity.

Mr. REGINALD HARRISON read a paper on this subject. "I have recently completed," he said, "a record of over 400 operations for stone in the male bladder. These figures include instances of almost every recognised method of removing a calculus from this position, and though lithotrity, as I saw practised by my late friend, Professor Bigelow of Boston, under the name of litholapaxy, largely predominates, lateral, median, and supra-pubic lithotomy, in their various modifications, have from time to time been utilised. The greater number of persons thus operated upon were male adults up to eighty-two years of age, though these figures include fifty-six male children, who for the most part were treated by lateral lithotomy. As showing the safety with which the lateral operation can be practised in these young subjects I may mention that only one death, or failure to recover completely, occurred, and this was due to chronic pyelitis some weeks after the operation. The stones removed by me in the course of these 400 operations include almost every variety in known chemical composition, though the hard urates and oxalates were the more frequent. One of the largest specimens of cystic calculus, weighing 1050 grains, now in the Museum of the Royal College of Surgeons of England, was successfully removed by lateral lithotomy. Medium-sized stones, from half an ounce to half a drachm in weight, were by far the most common, though some larger specimens, up to four ounces, occasionally presented. These points are referred to incidentally for the purpose of showing that my practice has not been limited to one method of treatment, but has been varied to meet the different conditions under which stone in the bladder has come under my notice. It may possibly be urged by some, considering the progress lithotrity has made during the present half century, that, save in instances where the stone is of such dimensions as to be beyond the capacity of any lithotrite, no other operation for its removal is now advisable. Such a view might be accepted if lithotrity, pure and simple, was always the entire success, immediately and permanently, we could desire. Mr. Cadge has pointed out in his Hunterian Lectures before the Royal College of Surgeons of England (1886) that the number of recurrences after the crushing operation, even in the hands of some of its warmest and most competent advocates, is such as to considerably detract from its completeness. As in the case of other surgeons engaged in work of this kind, I may state in general terms that my mortality has been a gradually decreasing one. Taking my last 100 cases of stone operated upon by the various methods referred to and excluding children and males under puberty, my number of deaths following crushing and nine cutting operations did not exceed 5 per cent. These cases no doubt at the present moment represent the best period of my work, and may be regarded as an outcome of the great advances that have been made in the operative treatment of stone in its various directions by Bigelow, Thompson, Cadge, Guyon, Keegan, and Freyer, to each of whom we are indebted for something

distinctive in either the method or the application of treatment. Fully recognising the work of these distinguished surgeons, I am at the same time disposed to give some prominence to three circumstances which have contributed in no small measure to the results I have arrived at: (1) to the earlier diagnosis of stone which now prevails, and the application of treatment before the calculus has attained any considerable dimensions; (2) to the detection of a stone in the bladder with the sound being concurrent with its removal; and (3) to a more extended experience in selecting the most appropriate and therefore safest operation. The object of this paper, however, is to briefly describe a method of operating which has been found particularly applicable to some exceptional cases, and where the results obtained from it contributed materially to the small mortality of a series of operations which embraces both lithotomy as well as lithotrity. It is not necessary for me to enter upon the history of perineal lithotrity, and to trace the various modifications which have from time to time been described. The proceeding has been referred to by Dr. Gouley[1] of New York in the following words: 'The name of perineal lithotrity was given in 1862 by Professor Dolbeau of Paris to an operation completed in one sitting by which the membranous portion of the urethra is opened, the prostate and neck of the bladder dilated instead of being cut, and a large stone crushed and the fragments immediately evacuated.' It was with this definition before me that I entered upon the study and practical application of the principles of this operation. I published my first communication[2] on perineal lithotrity some years ago, and I have practised it in fourteen instances in male adults. In every example the operation was successful, recovery being rapid and complete, and I am not aware that recurrence of stone has in any one of these cases followed.

"The chief features in connexion with the operation I am about to describe are: (1) the mode of obtaining access to the interior of the bladder from the perineum; and (2) the mechanism connected with crushing and evacuating the stone. From a number of experiments I made on the dead subject, as well as from the performance of medium cystotomy on the living for various purposes, it seemed unnecessary to do more than to make an opening from the perineum into the membranous urethra at the apex of the prostate, on a grooved staff passed along the urethra, sufficient to admit the introduction of Wheelhouse's small tapering gorget, and subsequently the index finger, into the bladder, as for digital exploration or as is done in the boutonnière or Cock's operation—more than this is not necessary. In Dolbeau's operation direct access to the bladder was obtained by this route, aided by the use of an expanding instrument, by means of which the prostatic urethra and neck of the bladder were dilated. It seemed to me, from some experiments made on the cadaver, that the latter means of dilatation was not only unnecessary, but was open to the objection that, unless used with the greatest care, it was possible to inflict serious damage. Further, I succeeded in demonstrating that by means of crushing forceps, shaped somewhat likes the blades of a lithotrite, and not exceeding by actual measurement in circumference that of an ordinary index finger, sufficient power might be provided to crush and assist in evacuating any stone that could be fairly seized in this way. These forceps are provided with a cutting rib within the blades, and the more powerful instruments, as you will see from the specimens I am showing you, are fitted with a movable screw on the handle. The fragments may subsequently be withdrawn by means of aspirator catheters passed through the wound, or even by the forceps. If care is taken to make the perineal wound correspond in size with the evacuating catheters, which should be of about the size of an ordinary index finger, there is no difficulty in keeping the bladder distended during the necessary manipulations. The chief points in favour of this operation are these: (1) it enables the operator to crush and evacuate large stones in a short space of time; (2) it is attended with a very small risk to life as compared with other operations where any cutting is done, such as lateral or supra-pubic lithotomy, and is well adapted to old and feeble subjects. In his recent address Mr. Swinford Edwards[3] shows that the latter operation for large stones has a mortality somewhere about 50 per cent; (3) it permits the operator to wash out the bladder, and any pouches connected with it, more effectually than by the urethra, as the route is shorter and the evacuating catheters employed are of much larger calibre; (4) the surgeon can usually ascertain, either by exploration with the finger or by the introduction of forceps into the bladder, that the viscus is cleared of all débris; (5) it enables the surgeon to deal with certain forms of prostatic outgrowth and obstruction complicated with atony of the bladder in such a way as to secure not only the removal of the stone, but the restoration of the function of micturition; (6) by the subsequent introduction and temporary retention of a soft rubber drainage-tube states of cystitis due to the retention of urine in pouches and depressions in the bladder wall are either entirely cured or are permanently improved. To lock up unhealthy ammoniacal urine in a bladder that cannot properly empty itself after a lithotrity, is to court the formation or recurrence of a phosphatic stone. Hence it is well suited to some cases of recurrent calculus. I have never known the wound to remain unhealed, except in those instances where, for some reason or other, it has been desired to construct a low-level urethra, as in an instance I have recorded elsewhere.[4] It is well adapted for some cases of stone in the bladder complicated with stricture in the deep urethra, as it enables the surgeon to deal with both at the same time. Nor does it expose the patient to the risk which may be attendant where lithotrity is performed with a weakened or permanently damaged urethra. Dr. Bazy[5] has also recently illustrated its advantage under these circumstances.

"I will conclude this paper with a brief record of three illustrative cases, and show the specimens removed:—1. A man twenty-four years of age, who was cut for stone by a perineal method ten years previously, came under my care in 1888 suffering from a large stone in the bladder and a small perineal fistula, the result of the preceding operation. As I thought it best to try and remove the stone and close the fistula at the same time, I adopted the method I have described, and broke up with the forceps, and extracted a large phosphatic stone weighing nearly three ounces in a few minutes. The fistulous tract was doubtless included in the line of section. A drainage-tube was introduced into the bladder through the wound. On the fifth day normal urine was discharged through the tube, when the latter was withdrawn, and the wound closed soundly in forty-eight hours. The patient was known to be well two years after this operation. 2. A man aged fifty-two came into St. Peter's Hospital in 1893 suffering from calculus and some form of prostatic obstruction. The latter complication requiring attention, I selected the perineal method, and in a few minutes, partly with the crushing forceps and partly with the evacuator catheter, I removed over three ounces of very hard urate calculus in addition to a polypoid excrescence of the prostate as large as a good-sized grape. A drainage-tube was passed into the bladder through the wound and the operation was completed without delay; the tube was retained for a week, and on its withdrawal the wound healed in a few days. 3. The third case was that of a man aged sixty-two, whom I operated upon in 1890. He had undergone five operations previously by other surgeons for stone, which seemed to be primarily a urate calculus and subsequently phosphatic. When I saw him another stone had formed within eight months; his bladder was pouched and almost completely atonic, as he was largely dependent upon his catheter. The state of his bladder, irrespective of the size of the stone, led me to select perineal lithotrity. There was a large post-prostatic pouch containing an ounce calculus, which was readily crushed by the forceps and removed in a few minutes. I also twisted off a piece of prostatic outgrowth which seemed to act as a valve. A drainage-tube was retained for over three weeks, when, the urine being normal, it was withdrawn. The wound healed soundly in the course of a few days. The power and function of the bladder have been completely restored, and there has been no recurrence of stone. I have selected these three cases as illustrating conditions of complication which not infrequently render lithotrity an imperfect success. The alternative operations of perineal or supra-pubic lithotomy would, I believe, have exposed the patients to a greater risk than I liked to incur. I therefore selected a proceeding which seems to me, whilst providing a most efficient and convenient means for rapidly removing a stone from the bladder, is, at all events, free from the risks of hæmorrhage and

[1] Diseases of the Urinary Organs, 1878.
[2] THE LANCET, Sept. 22nd, 1888.
[3] Medical Press and Circular, Oct. 12th, 1892.
[4] Surgical Disorders of the Urinary Organs. Fourth edition, 1892. J. & A. Churchill, London.
[5] La Semaine Médicale, Feb. 17th, 1893.

shock as not rarely attend the older forms of lithotomy. If a stone could be dealt with as soon as it was retained in the bladder no other operation than lithotrity would ever be practised, except, perhaps, in some few instances where a calculus is the natural consequence of some diseased condition within the bladder which is capable of being removed."

Spasmodic Torticollis.

Mr. NOBLE SMITH read a paper upon Spasmodic Torticollis and its Cure by Operation. He referred to the cases already contributed by him to THE LANCET, since which time he had operated upon other patients. He had now operated upon eight patients. Five of these had been completed; the remainder required further operation. Of these five, four had been completely cured and the fifth was greatly relieved. He described the peculiarities of a recent case, giving full details. Mr. Noble Smith's experience so far gave the following results: 1. That when the spasm is confined to the sterno-mastoid alone, removal of a piece of the spinal accessory nerve before it enters that muscle may be relied on as an absolutely certain curative remedy. 2. That should there be also spasm of the splenius capitis or other muscles operation upon the nerves supplying those muscles will also certainly be necessary, and that after such operation one may expect an absolute cure in these cases also. 3. As the nerve-supply to these posterior muscles is less definite than in the case of the sterno-mastoid, it is probable that some slight spasmodic action may remain in them, after operation, for a few weeks. 4. That ablation of pieces of the external branches of the posterior divisions of the second, third, and fourth cervical nerves is effectual in cutting off the nerve-supply of the splenius capitis. 5. That no disability which is of any consequence to the patient remains after operation upon one spinal accessory and upon the cervical nerves of one side, and that even in a case where the spinal accessory of one side and the cervical nerves of both sides were divided only a trivial amount of weakness remained, which gave the patient practically no trouble.

OBSTETRICS AND GYNÆCOLOGY.

Dr. ROBERT BARNES presented a memoir in Italian on General Physiology and Pathology illustrated by the Study of Obstetrics. The argument set forth was that in obstetrics we had always present a natural experiment, putting to the test under the forces called forth by pregnancy the effects of high nervous and vascular tension upon the general system. Thus were illustrated the production of new tissues, nerves, vessels, and glands. Under this trial certain effects touching on the borders of pathology and sometimes extending into pathology are evoked. Amongst these are the production of tumour, diabetes, albuminuria, jaundice, hæmorrhages, and other conditions. These are thus seen in the initiation, and thus give a light on etiology obtainable in no other way. General medicine often looks for etiology in the deadhouse, looking upon change of organic tissue as causes which in reality are only effects. The study of etiology at the origin of the disease indicates the true route to prevention or cure. It was a study, said the speaker, too much neglected, and therefore misunderstood. Obstetrics might be regarded as a threshold of medicine.

Catgut Threads in Uterine Disorders.

Dr. SCHMELTZ of Nice read a communication upon the use of Catgut Threads as a method of Draining the Uterus and its Appendages, a harmless proceeding by which he considered many serious operations might be saved. Having referred briefly to the various methods of drainage that other obstetric physicians had employed, and explained the way in which the threads should be introduced, he enumerated the following conditions as those in which he believed catgut threads could be employed with advantage, and in which they certainly should be used as antecedents or adjuncts to the more drastic methods of treatment. 1. Puerperal, catarrhal, or gonorrhœal metritis. Here they can be used as a method of drainage after curetting or cauterisation. 2. Chronic, catarrhal, or purulent salpingitis. 3. Uterine displacements; the over-congestion of the uterus being relieved by drainage, the organ can be replaced. 4. Amenorrhœa and dysmenorrhœa. Here the method of drainage by catgut threads has been found in Dr. Schmeltz's hands particularly successful in relieving the symptoms. 5. In atresia of the cervix.

A New Method of Operation in certain cases of Supra-vaginal Hysterectomy.

Dr. GRANVILLE BANTOCK read the following communication on the subject:—"In a paper which I read before the American Gynæcological Society in 1887 I detailed the steps by which I had been led into the adoption of the extra-peritoneal method of treating the pedicle in abdominal hysterectomy in preference to the intra-peritoneal method. I then pointed out that in my first case (November, 1878) I adopted a method which in its essentials was that which was subsequently popularised by Schrœder, and which even now has its advocates. I related how failure to arrest the bleeding from the stump of a pedunculated fibroid by means of the ligature and suture in more than one case of large pedicle compelled me to have recourse to the extra-peritoneal method with successful results, and how the slipping of the ligature in two cases of small pedicle, with a fatal result in each, confirmed me in my determination not to employ the intra-peritoneal method if I could by any means avoid it. I pointed out how simple and safe was the operation of supra-vaginal hysterectomy in cases where the broad ligaments were long and the uterus could be raised well out of the pelvis; that while in some cases the immediate application of the serre-nœud was possible without any preparation, in others it was necessary to make a pedicle for oneself; and I described the method I adopted in the latter case when the broad ligaments were short and it was incumbent to gain such increase in the length of the pedicle as would make it possible to apply the serre-nœud, a method which consisted in first securing the broad ligaments, either temporarily by means of forceps or elastic ligature, or permanently by an ordinary transfixing ligature on each side, then dividing them near the uterine cornua so as to allow the uterine body to be raised up, and, finally, applying the serre-nœud when sufficient length of pedicle had been thus obtained. But I soon found that this did not suffice for some cases—as, for example, when the lower segment of the uterus and one or both broad ligaments were involved—and it then became necessary to develop the operation further in the same direction. It is this further development I now desire to bring to your notice. For the purpose of description, and as illustrating the way it came about, it will be convenient to describe the first case in which I adopted the method. The tumour was an example of the multiple fibroid variety, of somewhat globular form, much nodulated, and occupying the abdomen from the pubes to midway between the umbilicus and the sternum, and weighing about six pounds. The cervix was somewhat elevated, of nearly an inch in length, and passed at once into the abdominal mass, which on its pelvic aspect presented the same nodular character. On the left side one nodule, the size of a hen's egg, stood out, as if quite separate, and occupied a position between the layers of the broad ligament below the level of the os externum. On delivering the tumour through an abdominal incision about seven inches long several small subperitoneal fibroids were brought into view low down on the posterior aspect, and it was at once evident to me that a different method must be adopted from any I had hitherto employed. After the application of a temporary elastic ligature around the mass as near its base as possible the peritoneum was divided all round about three inches in advance of the elastic ligature. The largest mass was now shelled out, together with several smaller fibroids, and the uterine body, which was found to occupy a central position, was then separated from its loose connexions in front with the bladder and at the sides with the broad ligaments and posteriorly from its peritoneal covering by careful dissection, leaving a thin layer of uterine tissue attached to it, and shelling out in the process some of the small subperitoneal fibroids already mentioned. When the uterine body was thus isolated as low as the level of the elastic ligature—about that of the internal os—the serre-nœud was at once applied and the uterine body cut away. When the temporary elastic ligature was removed the raw surface was free from bleeding, and it was evident that the uterine arteries were under the control of the serre-nœud. It was necessary now to secure union between the parietal and visceral peritoneums. For this purpose several sutures, involving the peritoneum only, were employed to stitch them together, and to prevent retraction double sutures were used, one at the lower end of the wound next the pubes, and two on each side, passing through the whole thickness of the parietes and tied over a small roll of gauze to prevent their cutting through the skin. At the

angle of the parietal wound above the stump the peritoneal edges were secured to that part of the envelope which covered the back of the uterus by two interrupted sutures, the first of which caught up the parietal peritoneum a quarter of an inch from the edges, the second involving the edges only, thus forming a sort of collar around what for convenience sake may be called the stump. The remainder of the wound was closed in the ordinary way. Thus the whole of the raw surface was outside the peritoneal cavity. The sac thus formed was packed with iodoform gauze. The small tumour springing from the left side of the uterus below the level of the elastic ligature and serre-nœud was left undisturbed and gave no subsequent trouble. The complete success of this case opened up a new field of operation, and instead of rejecting as unsuitable for operation by any method short of complete extirpation cases in which the lower segment of the uterus, or even the cervix itself, was involved I was enabled to attack them on a definite plan, subject to variation in the details according to circumstances. It would be wearisome to multiply cases, for while the principle is the same the details are very variable. The essential steps of the operation then are—viz., to secure the broad ligaments, and, if possible, the uterine arteries, by ligature; to apply a temporary elastic ligature around the base of the tumour; to divide the peritoneal envelope of the uterus all round, about two to three inches in advance of the temporary ligature; to isolate the uterine body down to the level of the internal os, and there apply the serre-nœud, or permanent elastic ligature; to arrest any bleeding that may occur on removing the temporary elastic ligature; and finally to secure the uterine envelope to the parietes by double sutures, and then remove any redundancy of tissue and pack the cavity with iodoform and absorbent gauze after the closure of the parietal wound. The ovaries may be removed at any convenient stage of the operation. The redundant portions of the uterine envelope are best removed by means of Paquelin's cautery. I may be asked what my justification is for bringing this method to the notice of my professional brethren or on what grounds I base my recommendation of it. My answer is the low mortality that has hitherto attended the operation. Although the method has been reserved for the most difficult cases, in which it was not possible to employ any other extra-peritoneal method, and in which the intra-peritoneal method or complete extirpation would be unusually difficult, the mortality so far stands at one death in twenty-three operations. Nor can even that one death be fairly attributed to the mode of operation; for when the patient first came under my observation the evidence of serious kidney disease was so marked that I refused to operate. At the end of six weeks, under careful dietetic combined with medicinal treatment, the amount of albumen in the urine diminished so much and the general condition so improved that I was induced to give her 'the benefit of the doubt.' This was so far justified in that the patient made very satisfactory progress after the operation with the exception of the character of the urine, and it was not till the sixteenth day that the kidneys gave signs of failure. The patient died within twenty-four hours thereafter. This method compares favourably with complete extirpation as regards facility of execution, and with the intra-peritoneal method also as regards final results. There is only one point in which it compares unfavourably with the latter, and that is as regards the period of convalescence. I admit most freely that when a patient does recover favourably after operation by the intra-peritoneal method the period of convalescence is one, two, or even three weeks shorter than that which obtains under similar conditions by the extra-peritoneal method; but one can hardly put a loss of even three weeks into comparison with the loss of a life or lives. At the meeting to which I referred in my opening sentence, and in reply to a very distinguished gynæcologist—my friend, Dr. Aug. Martin—who then advocated the intra-peritoneal operation, I pointed to the superiority of my results by the extra-peritoneal, and said that I was quite content that he should continue his method while I should continue mine, leaving it to the future to decide between us. Dr. Martin has abandoned his operation while I have been more confirmed in mine. I have only to add that my total mortality under the extra-peritoneal method in 166 cases is about 15 per cent., that while in the first half the mortality was 18 per cent., that of the second half was 12 per cent., but that of the last fourth it was only 6 per cent., or a loss of 3 of 44, these 3 including the death from Bright's disease. When it is borne in mind that I do not operate in more than a fourth of the cases that come under my observation, and only in those cases in which the life of the patient is in danger from hæmorrhage or degeneration of the tumour (usually cystic), or in which the sufferings of the patient are such as to demand surgical interference, I think my recent results may be considered satisfactory."

Ventrofixation of the Uterus.

Dr. SINCLAIR (Manchester) read a paper on the Relation of Pregnancy to the Operation of Ventrofixation. He mentioned twelve cases in which he had operated on account of retroposition of the uterus, with complications, chiefly adhesions. In one case only was it necessary to remove the ovary and tube on one side. All the other cases were purely "hysterorrhaphy." In two of the cases pregnancy had occurred after operation, and in one of these cases the patient is pregnant for the third time since the operation. Observations made upon these cases appear to prove that there is no unusual distress during the course of pregnancy, that parturition is normal, and that the process of involution is not in any way disturbed. The position of anteflexion is maintained in every case, and the patients are relieved of the troubles produced by the malposition of the uterus and such complications as adhesions and prolapse of the ovaries. Among the conclusions arrived at was the following, "after making full allowance for the element of risk and the incidental drawbacks, the operation of ventrofixation is not only justifiable, but is indicated in a certain limited class of cases of retroflexion of the uterus with complications."

MEDICINE.

The Rheumatic Nature of Chorea.

Sir DYCE DUCKWORTH read the following paper on the subject:—"The exact pathogenic relations of the disorder known as chorea Sancti Viti are not yet amongst the certainties of medical science. The problem remains unsolved. In this communication I venture to discuss it, and to offer an explanation which, if it shall not ultimately prove acceptable, may at least afford a useful basis for discussion in such an assembly as I now address in the Eternal City. My remarks apply to the disorder in its most common form, occurring almost exclusively in the young, and chiefly in girls. The fact that, happily, the great majority of cases recover has rendered the study of such morbid anatomy as is discoverable somewhat infrequent, and the lesions of the nervous system, in which part they may naturally be sought, are, so far as we have any knowledge, certainly not coarse and demand both skill and patience on the part of the pathologist to detect them. Here, as in the case of all obscure diseases, we find that many opinions have been propounded both in regard to morbid anatomy and to the essential cause of chorea. I do not propose to enumerate, much less to discuss, the various theories that have been set forth in respect of the nature of chorea. I shall address myself at once to the thesis I desire to defend, and that is to maintain that this disorder is not only, as is, indeed, commonly believed, connected sometimes with rheumatism, but is itself a variety and a manifestation of that disease. Eleven years ago I ventured to state this view, and increased observation has largely confirmed my conviction of the truth of it. Since that time there has been a steadily growing tendency in favour of this opinion, although some thoughtful and experienced physicians have vigorously resisted it. Great merit is due to the Parisian school for maintaining the importance of the underlying rheumatic element in most cases of chorea, to M. Roger in particular, who showed that heart troubles might sometimes succeed as well as precede choreic attacks, and to M. Jules Simon, who affirmed that chorea was most commonly accompanied by cardiac disease and appeared to be a consequence of the rheumatic diathesis. The late Dr. Copland declared in his dictionary that he first demonstrated the concomitant association with rheumatism, and that the rheumatic diathesis constituted a predisposing cause. William Heberden[1] a century ago noted that chorea 'has been preceded by a stiffness and pain in the knees.' It was soon discovered

[1] Bright, Scudamore, Todd, and James Begbie all drew attention to this matter. The latter, observing the occurrence of chorea and rheumatism in one family, also the frequency of associated endocarditis in chorea, was led to the belief that the rheumatic state was the cause of the latter disorder. Addison, about 1849, at Guy's Hospital, first directed attention to the frequency of cardiac murmurs in chorea.

that the incidence of chorea, mainly on children of the female sex, corresponded exactly with that of rheumatism and also with the excessive occurrence in them of endocarditis. Heberden noted that four times as many girls as boys were attacked.[2] The position I assume in regard to this matter is that chorea is to be expected as a possible outcome or phase in young persons who are the subject of the rheumatic habit of body. I recognise such a diathesis, as I do that of others, in spite of the contempt poured on such views as being unworthy of scientific medicine in the last years of the nineteenth century, and I believe in predispositions texturally implanted towards rheumatism, gout, tuberculosis, and some other morbid states. Conversely, I recognise such habits of body as can never become rheumatic, gouty, or tuberculous under any provocation, and I feel as certain of all this as I do in respect of any facts in biology. Bodily textures thus predisposed are vulnerable in respect of the special peccant agents which may attack them, be they chemical or germinal. Rheumatic disease is especially apt to work its worst mischief in early life and in girls. We have now a much larger conception of the varied manifestations of rheumatism than we had a quarter of a century ago and now recognise as rheumatic a form of tonsillitis, varieties of erythema, urticaria, purpura, periosteal nodes, integumentary nodules, and no less the rheumatic nature of vague pains, commonly called 'growing pains,' in children. We also know that it is quite common for children to have no other manifestation of acute rheumatism than peri- or endocarditis. We now likewise recognise the inherited tendency to disorders of rheumatic nature. Without doubt fallacies have crept into most of the statistics compiled respecting the association of chorea with rheumatism in respect of family histories and predisposition. Observers have too often sought to find evidence of overt rheumatic manifestations in the subjects of chorea, but this is often wanting; yet there may have been ancestral taint of it even if history of it be not procurable; and, again, overt rheumatic conditions may certainly supervene later on in the choreic patient.[3]

"To my mind an attack of chorea is an attack of rheumatism, and I constantly teach that chorea is one of its manifestations. We have assuredly learned that the old conception of rheumatism as a disorder merely affecting joints and fibrous textures is much too limited. There are, without doubt, other very plain manifestations of its effects, and amongst these is chorea, or 'rheumatism of the brain,' as it was well termed by Sir Andrew Clark.

"A difference of opinion exists as to the significance to be attached to the occurrence of endocarditis in chorea.[4] This lesion has been termed by Dr. Sturges "the great anatomical fact of chorea," but he would limit it to cases in which no history of rheumatism can be obtained. He has to concede, however, that 'the separateness of choreic endocarditis gets obscured owing to the frequent admixture of rheumatism.' He yet maintains that there is a specific 'endocarditis proper to chorea,' which 'is seen in the form of minute beads of fibrin along the edge of the mitral valve,' an appearance which he believes is very rare in any other association; and he states further that 'if we accept as evidence the very same physical signs we are wont to interpret in that sense in the case of acute rheumatism, the occurrence of endocarditis in chorea, altogether apart from rheumatism, is far from being rare.' I am not able from my own experience to confirm these opinions of Dr. Sturges.[5] He appears to make it a question of degree, and to believe that the valvular vegetations are smaller in choreic endocarditis unconnected with rheumatism. The argument is not convincing. In the issue of many cases recovery no doubt takes place in respect of the valvular lesions, but in many others serious damage results. Dr. Sturges has expressed the opinion that mitral stenosis is never met with as a result of choreic endocarditis, whereas it is only too common as a sequel in the rheumatic form, and particularly in girls. This opinion is contrary to my own experience as well as to that of other observers. I believe it to be impossible to distinguish such endocarditis as is found in fatal cases of chorea from that met with after acute rheumatism; the mere degree or intensity of it in any case, and the particular valves affected, appear to me to be no fair criterion as to its etiology or intrinsic character. Nor do we get any aid in this determination from the presence or absence of such a sequence as mitral stenosis. Regarding chorea as a rheumatic disorder alighting more particularly on the brain, it might be expected that in fatal cases some recognisable lesions should there be manifested. Dr. W. H. Dickinson's researches demonstrated the presence of hyperæmic foci spread very generally over the brain and spinal cord, with dilated arterioles and small hæmorrhages, especially in the basal ganglia. These discoveries have not so far been helpful in determining the true nature of chorea, and it is, at least, not improbable that, if searched for, similar lesions might be discovered in the wake of other severe and generalised disorders. In such a disease as chorea we may fairly assume that the gravest stress falls either on the cortical motor area, on the basal ganglia, or on both. The change detected by the morbid anatomist must be the grossest induced by the disease and be such as have been associated with conditions that have proved fatal. We need not expect so grave a degree to be reached in cases which recover. It is to be borne in mind that in children, and especially in females before and at the time of puberty, there is a developmental instability in the great cerebral centres, basal and cortical, and possibly therefore such parts may more readily yield under the influence of rheumatic poison. That this instability and vulnerability may be aggravated by imperfect nutrition and depressing environments, and be further intensified by the malign and exciting influences attaching to urban life (chorea being essentially a disease of cities and rarer by far in country life), we can readily understand. The most important modern contribution to the morbid anatomy of chorea in respect of brain lesions is that of Dr. Charlewood Turner of the London Hospital.[6] A careful study of five cases indicated the presence of well-marked changes in the Rolandic region in the deeper layer of the cortex, affecting the larger pyramidal nerve cells. They were swollen, their protoplasm being dense and cloudy and obscuring the nucleus. They were too readily stained by reagents. Dr. Turner believes these changes to be recoverable unless the highest grade of this swelling was reached. He found no indications of embolism of small vessels, but he conceives that any conditions tending to cause structural lesions of nerve cells must tend to cause the like in small vessels supplying them, and thus lead to thrombosis. Such vascular lesions as Dr. Dickinson described he attributes to the extreme depression and typhoid condition of moribund choreic subjects. In this valuable contribution Dr. Turner discusses the relations between these lesions and the clinical features of chorea, and maintains that the latter are indicative of structural mischief in the brain, and not attributable to nutritive derangement, with functional inhibition only, of the central nervous system, as in the case of hysteria when volition is in abeyance. The course in chorea is more akin, he believes, to that which is found in inflammatory and febrile conditions, in syphilis, and in other structural diseases of the brain. He further believes that the loss of volitional control and the intellectual dulness which are notable in chorea are also indicative of cortical lesion, whereby the reflex and emotional reactions have uncontrolled play. Dr. Turner does not recognise rheumatism as a directly predisposing cause of chorea, but is of opinion that it is only one of several other

[2] Dr. Sturges gives three to one as the proportion.

[3] The following statistics are gathered from the practice of my wards at St. Bartholomew's Hospital for the ten years 1883-93. I give them for what they are worth having regard to the great difficulty of securing trustworthy histories from persons of the rank of hospital patients. There were 70 cases of chorea admitted for treatment; of these 28 had a personal history of acute rheumatism. In 27 other cases there was history of rheumatism in the family. In 14 cases there had been near relations affected with chorea. In 7 cases of the latter there was a personal history of rheumatism in the patient, while in 5 there was no personal history. In 1 case there was a history of chorea, but none of rheumatism in the family. Thus, in my cases there was obtained a rheumatic history in 78·5 per cent.

[4] It is right to mention that the views expressed in this paper are gaining wider acceptance. I believe that Drs. Cheadle, Lees, and Barlow are not far from agreement with them, and Dr. David Drummond of Newcastle-on-Tyne has recently expressed his belief that in a certain proportion at least of cases of chorea that disease is simply a manifestation of the disturbance by the rheumatic poison of the function of somewhat unstable and growing cortical brain-cells; and he asks: "Are we, before admitting the inductive force of the majority, to wait until in every case we can demonstrate a clearly defined rheumatic illness, as at present understood, in the form of gross articular lesions? Is this scientific? May we not have, without joint-mischief, a rheumatic diathesis to which belong the choreas, the pleurisies, the headaches, the cutaneous eruptions, &c., so frequently associated with rheumatism?"—Address in Medicine. Meeting of the British Medical Association, Newcastle-on-Tyne, 1893.

[5] He remarks: "It is only by rare accident that we see post mortem the true endocarditis of chorea."

[6] Transactions of the Pathological Society, vol. xliii., p. 8. London, 1892.

secondary incitants, such as debility or anæmia, increasing the natural instability of the higher nervous centres in youth. Dr. Turner doubtless would not agree with me in affirming that if chorea be truly 'rheumatism of the brain,' the lesions just described may fairly be conceived as amongst the results of it. There was rheumatic history in two of the five cases recorded by Dr. Turner, but in all of them there was endocarditis, and he makes no attempt to differentiate the endocarditis as choreic in some cases and rheumatic in others.

"There remain other clinical features of chorea indicating special affection of the cerebral cortex. These have been ably shown by Dr. D. B. Lees in some admirable clinical lectures on this subject. He states: 'From the facts that chorea is very frequently unilateral, and has the distribution of a hemiplegia, that when it affects the muscles of the chest and abdomen it affects both sides, that it is absent during sleep, and that it is associated with curious mental conditions—all these statements point to the conclusion that it is mainly a condition of the brain. The motor centres for the limbs and those of the face and tongue are specially affected, and thus are produced the involuntary movements, and also the paralysis or general weakness of the affected limbs which is often a very marked feature of chorea, and may indeed quite preponderate over the spontaneous movements. ..... The affection of the cortex may show itself not only in its action on the motor convolutions for the limbs, face, and tongue, but also in the implication of the speech centres, producing more or less complete aphasia.' Dr. Lees alludes also to 'intellectual defects' in cases of chorea, 'alterations of moral character, in temper and behaviour, mental dulness, loss of memory, hysteria, and mania'—indications of some poison acting on other parts of the nervous system, and especially on the cortex of the brain. He further tells of a case of chorea that proved fatal by hyperpyrexia. One is struck by the analogy, to say the least, with rheumatism in this respect. Dr. Lees notes the absence of knee-jerk in some cases of chorea, which appears to him to indicate the effect of a blood poison possibly acting on the involved centres in the spinal cord.[7] The facts thus far set forth by the light of morbid anatomy in chorea, relating both to cardiac and cerebral lesions, must, I conceive, lead an unprejudiced observer to suspect that some special peccant material, or toxine, is concerned in the production of this malady. As the evidence is already certain in respect of that poison being of rheumatic nature in by far the majority of cases, we have no alternative but to suppose either that this is the *vera causa* in all cases, or that a certain small percentage of cases of chorea are induced by other toxines possessing properties of a very remarkable affinity to that produced by rheumatism. I venture to propound the view that the former explanation is the true one, and that a rheumatic taint underlies all cases of chorea. Such a conception of chorea, however, would be quite inadequate if we were to rest here and fail to recognise a determining factor in every example of the disease. That determinant is shock or strain of the nervous system. On this point, indeed, all observers are agreed. The results of shock, of powerful or of prolonged emotional influences upon young and rapidly growing children, are not uniform. One may meet with acutely induced anæmia due to shock, just as one may meet with chorea. Many children are exposed to strain, shock, apprehension, and nervous exhaustion, and many to fright, but chorea is not a sequel of these save in occasional instances. Given a rheumatic habit or predisposition, and the result of nervous shock is not infrequently an attack of chorea. I do not believe that all subjects of the rheumatic diathesis are necessarily liable to chorea. Other phases of that predisposition may or may not supervene. But I conceive that as articular symptoms prevail in some, cardiac trouble in others, tonsillitis in some, and cutaneous manifestations in others, so may cerebral symptoms be determined either independently or in association with other phases of rheumatism. I therefore seek to justify my belief that chorea is a rheumatic manifestation. I do not conceive this argument to be impaired by the fact that a line of treatment suitable for ordinary rheumatic affections is of no avail in chorea. The best remedy we have for rheumatic fever—salicylates or salicyl compounds—are of no value in some well-marked rheumatic disorders. I may note, however, that chorea is better treated by full doses of arsenic than by any other drug, and it is recognised that arsenic is of high value in several forms of rheumatic disorder."[8]

[7] Clinical Journal, March 8th and July 12th, 1893.

Diet in the Treatment of Diabetes.

Dr. SAUNDBY (Birmingham) desired to direct the attention of the section to the important question of Diet in the Treatment of Diabetes. It has been long held as a fundamental rule that diabetic patients should be allowed as little carbohydrates as possible. He proposed that in future we should reverse this and declare that diabetics should be permitted to eat as much carbo-hydrates as they can assimilate without increasing their sugar excretion. His manner of proceeding is to determine the excretion of sugar in each individual when placed upon a diet from which all starch, sugar, &c. have been excluded, and then, taking this figure as the standard, to permit gradually the use of small quantities of potato, lævulose and toast as careful analysis of the urine proves that each successive addition does no harm. He has found that the majority of patients can take a moderate amount of carbo-hydrates without injury, and he maintained that this method is very much better for the patient and affords a *régime* which it is possible for him to conform to.

Dr. J. SHRIEBER of Meran then read a paper on the Different Forms of Sciatica and their Treatment. Founding his experience on 500 cases or thereabouts, Dr. Shrieber gave it as his opinion that in a large majority of cases the sensory troubles and the affections of locomotion were due to a rheumatic condition of muscle, tendon, fascia, ligament, or joint rather than to any inherent neuroses. Dr. Shrieber explained the anatomical and functional differences of the usual forms of sciatica, and pointed out the extreme importance of diagnosis as a foundation of rational treatment. Above all, in female subjects the presence of peritonitis, puerperal in particular, might complicate the symptoms. As an instance of the necessity for careful examination as a prelude to successful treatment, he narrated a case where the pain in the course of the sciatic nerve had been due to a syphilitic condition of the nerve at its passage from the pelvis.

DERMATOLOGY AND SYPHILOGRAPHY.

This section opened on Friday, March 30th, under the joint presidency of Professor KAPOSI of Vienna and Professor T. DE-AMICIS of Naples.

Blennorrhagia.

Dr. TOUTON (Wiesbaden) read a paper on the Gonococcus of the Blennorrhagic Process, in which he maintained that the gonococcus was the cause of the blennorrhagic process, and that the diagnosis can be made certain by microscopic examination. In most cases the gonococcus is most abundant at the beginning, and if the examination be negative in some cases at other periods a provocative inflammation will make it evident. In a few cases the assistance of Wertheim's culture method is necessary, especially where doubtful involution forms are seen. The softer epithelium is invaded, but not the horny. The cellular tissues and serous membranes are also affected, the extension being by the lymph channels.

Dr. BARDUZZI of Siena followed with remarks on the same subject.

Dr. PADULA read a paper on the Infective Fever of the Blennorrhagic Virus; Dr. J. GRÖNFELD one on the Present Position of Urethroscopy; Dr. ROCA, on Lemon-juice in the Treatment of Blennorrhagia; Dr. BARRUCCO, on the Local Treatment of Urethritis with a New Form of Syringe.—Dr. NEISSER disbelieved in the invasion of connective tissue by the gonococci, except in rare cases. Every case of gonorrhœa should be examined most carefully for the gonococcus, and very often, so as to avoid error. In his large practice he had never known a case of chronic urethritis infecting the

[8] An interesting point is to be noted respecting the time of year when chorea is most prevalent. Heberden remarked that there was a tendency to it every spring and autumn for three or four years. The facts of recurrence and relapse show at least an analogy with rheumatic ailments. The incidence on the two sexes is the same, and occurs at the same time of life. Many cases are observed in the months of March and April, and fewer are met with as summer sets in. Rheumatism is observed to follow the laws of nervous diseases in respect of its frequency and intensity at certain seasons of the year. Thus the curve of intensity begins to rise in February, and goes up during March and April, and falls at the end of that month, disappearing in summer and autumn and reappearing in December. Dr. Weir Mitchell noted the effects of mental labour in determining attacks of chorea. Thus, the preparation for school examinations in June, in America, appears to have a determining influence. (Dr. Weir Mitchell remarks on the infrequency of chorea in negro children.)

wife after repeated examinations had revealed no gonococci. The clinical appearances alone have but little value; a case may show but little secretion and yet be very infectious, and one with a copious secretion may not be at all infectious. If every man with cocci in his urine was prevented from marrying a large majority of men would be precluded. The following members of the section also took part in the discussion: Drs. Mibelli, Bröse, Jullien, Wahrschewski, Grönfeld, Petersen, Mange, and Casper; Dr. Touton replied.

At the afternoon sitting Dr. Hallopeau presided, assisted by Dr. Breda. The following communications were down for reading, but several of the authors did not appear: Dr. Besnier (Paris), Diethetic Prurigos; Dr. Schiff (Vienna), A New Clinical Form of Ulcerative Inflammation of the Skin; Dr. B. Fraenkel (Berlin), on Pachydermia; Dr. Cerchez (Berlad), The Treatment of Psoriasis by Large Doses of Iodide of Potassium; Dr. Radcliffe Crocker (London), Urticaria with Persistent Lesions; Dr. Schwimmer (Budapest), a Special Note on the Cure of Discolourations of the Skin.

At the second sitting of the section on Saturday, March 31st, Professor Laing presided.

Dr. SAVILL (London) gave an interesting account of the Epidemic Disease of the Skin which occurred some time ago in certain London infirmaries, and showed a large number of drawings and photographs in illustration.

The Present State of the Lichen Question.

Dr. NEISSER (Breslau) then opened a discussion on the Present State of the Lichen Question. He maintained that the term "lichen" should be confined to the disease known as "Lichen ruber," and that this disease occurs under two principal forms—the "lichen (ruber) planus" of Wilson, and the "lichen ruber acuminatus" of Hebra-Kaposi.—Mr. MALCOLM MORRIS (London) followed with a *résumé* of the subject, and expressed his opinion that the term "lichen" should be limited to Wilson's original disease "lichen planus," which he considered identical with Hebra's lichen ruber.—The question was discussed by a large number of speakers, including Drs. Majocchi, Ehrmann, Schwimmer, Hallopeau, and Schiff, the last of whom considered that "lichen ruber acuminatus" and "pityriasis rubra pilaris" of Divergie are identical diseases, and that the word "lichen" should be disused as a general term.—Several papers then followed, including one by Dr. RAVOGLI (Cincinnati) on a Psorospermous Disease of the Nose. This gave rise to some discussion.—Dr. ALFRED EDDOWES (London) read a paper on the Treatment of Ringworm, giving the results of a large series of cases, and describing his modifications of Unna's method. He disapproved of severe applications and of epilation, and he considered that with proper care children under treatment might be allowed to attend school.—Dr. ABRAHAM (London) exhibited an Apparatus he was now employing in Obstinate Cases of Parasitic Diseases of the Scalp, by means of which parasiticidal applications can be introduced under pressure deeply into the hair follicles. He first thoroughly cleanses the shaved patch with hot soap and water, alcohol, and ether, then creates a partial vacuum over the spot, and allows the liquid to penetrate and saturate the skin under the atmospheric pressure. He had used the apparatus with success in several cases which had resisted other treatment.

GENERAL PATHOLOGY AND PATHOLOGICAL ANATOMY.

The Adaptation of the Organism in Pathological Changes.

Professor NOTHNAGEL of Vienna gave an address on the above subject, in which, after referring to the far-reaching influence of Darwin's labours even in fields beyond those with the cultivation of which he was immediately concerned, he mentioned instances observed in pathological processes in which the same principle of adaptation to environment might be observed in a striking manner. "How this takes place, what powers come thereby into operation, he could not as yet in most cases perceive." He instanced complete recovery from acute infectious diseases, but directed attention chiefly to pathological changes of a more persistent character. In the latter case, he remarked, not only could function be restored, but fresh structures could be brought into existence to meet the exigencies of the economy. After speaking of the establishment of collateral circulation in the case of interrupted arteries of hypertrophy in heart disease, of the compensatory action of remaining portions of liver tissue, of the activity of the bone-marrow when the spleen has been extirpated, of the increased respiratory surface of the unaffected lung in cirrhosis of one of those organs, of the repair of bone after injury, and of the digestion of albumen by the intestines after atrophy of the mucous membrane of the stomach, he remarked: "These few examples show how injuries of the most severe kind may be overcome, sometimes to such an extent that in the general condition of the organism no disturbance whatever is perceptible. The functions of particular organs and tissues proceed as they did before the storm, and even the form of organs and portions of the body accommodate themselves." He then asked what was the cause of this accommodative faculty and indicated, with a truly German breadth of thought, the far-reaching tendency of such an inquiry and its intrusion into the general field of the argument of design in nature. Avoiding, however, the discussion of a subject beyond the range of his present purpose, he contented himself by criticising Pflüger's teleological views, and the causal law which the latter formulated—namely, that "the cause of each necessity of the living being is the same as the cause of the satisfaction of that necessity." Pflüger attached importance in the operation of such a cause to the well-being of the individual. As will be evident presently, Professor Nothnagel does not take quite the same view. It would have been remarkable in a speculative discussion if he had not run against the soul *(psyche)*; and the most difficult of all problems, whether the conscious soul, also, is a natural phenomenon of like character with the purposive processes, to which Pflüger refers, was touched upon by Professor Nothnagel, who is not a teleologist in Pflüger's sense. The speaker then went more into detail as to the compensatory processes attending ligation of arteries and diseases of the vascular system, of the kidneys, liver, and bone, and referred specially to the works of Recklinghausen, Rosenstein, Roux, and Julius Wolf, pointing out that the increased labour of compensating organs involved an increased blood-supply, which produced hypertrophy, and in the case of young subjects, in addition, hyperplasia. "Recent researches of Ponfick," he also remarked, "have shown that even in the case of removal of a considerable portion of the liver a new formation of the organ takes place. This also occurs when a portion of the liver is destroyed by a non-malignant disease, such as ecchinococcus. After the loss of three-fourths, the crippled organ may sometimes recover all its original weight and volume." Leaving the grosser evidences of compensation, Professor Nothnagel addressed himself to a brief consideration of what is implied in the term "reserve force" "This notion denotes most simply the idea presenting itself from many facts, that, in every normal activity of an organ, only a certain fraction of the whole disposable force is utilised; rest first came into operation in the case of extraordinary stimulation, and on this account one may regard it as reserve force" Discussing increased functional activity, Professor Nothnagel asks the question: "What, however, causes this increased functional exertion? What is its cause? It is clear that the key to the situation is here. The answer to this question determines the whole conception of compensation and accommodation. The answer is: the increased action of an organ, or part of an organ, can only be caused by an increase of those stimulants which liberate their specific activity." We have not space to dwell at great length upon the numerous suggestive points of Professor Nothnagel's able address, in which, from cautious and well-weighed observation, he passed to a consideration of the probable causes of grosser change, but will conclude by giving a *résumé* of his remarks in his own words: "There frequently develop in the course of pathological changes, and as a necessary consequence of these, functional morphological accommodations calculated to remove evil results from the organism. At other times, on the other hand, these accommodations create new dangers for the organism and in a larger series reach, as a rule, no kind of compensation; as in the obvious case of the testicles, or, as sometimes happens, in the case of a completely anæmic vascular aiding circulation arises, unless the pre-existence of ever so territory; when the need of blood is pressing, none enters, no small bloodvessels facilitate the change. All these facts force us to the conclusion that no kind of necessity calls forth the so-called accommodations described as met with in pathological changes. No sort of purposive design plays a part in their development. They come into being, they arise where it is possible for them to do so—that is, where the material possibility for their existence is afforded. If, however, the material conditions are present they must arise, whether it

is convenient for the individual or not. That, as a fact, they are so often profitable is the necessary consequence of the manner of their origin. The latter itself is, however, ruled by laws which in living nature ultimately operate by compulsion, like the law which causes the fall of a stone, the downward flow of a brook, or the attraction of two molecules. With the spirit of Pflüger's views, already mentioned, I agree, but with reservations. I should only desire the term "necessity" to be completely abandoned, as it may lead to misconceptions, and still more the suggestion as to the well-being of the individual, as this, at least in the pathological conditions with which we are at present concerned, does not quite agree with facts. In this sense it is right that I should only recognise "purposeless natural requirements" (*zwecklose Naturnothwendigkeiten*). I am, indeed, of opinion that the becoming and existence of these processes are ruled by the inevitable laws which cause and regulate all biological processes. Whether these laws themselves have any purpose is a question which brings us to the great problem (*Daseinsräthsel*), the solution of which by inductive means even giant intellects (*Riesengeister*) have not dared to attempt, whose veil deductive speculation touches, and whose *felt* revelation (*gefühlte Enthüllung*) but not comprehended knowledge (*begriffenes Verständniss*) is only for the sensitive spirit (*empfindendes Gemüth*).

Entozoa in Man.

Dr. Sonsino of Pisa read a paper on the Entozoa of Man as they exist in the Region of Tunis. The following are the more important conclusions at which he has arrived. He has found that, particularly in the European population of the town, the common entozoa, Ascaris lumbricoides trichocephalus dispar and Oxyuris vermicularis, are of very frequent occurrence. This is also met with in the population around Gabes and Gafsa, situated to the south of the town of Tunis. Another entozoa frequently found in the town of Tunis is Tænia mediocanellata. Perhaps this is the most common of the Cestodes group. Ankylostoma duodenæ is found both at Gabes and Gafsa, and forms a factor of a very serious form of anæmia found among the people there. Dr. Sonsino has frequently met with bilharzia hæmatobia in the natives of Gafsa, in some individuals coming from a place (Bdigilli) near the Shott-èl-Dgerid. The symptoms of bilharzia disease in South Tunis are similar to those which are met with in Egypt.

Urinary calculi are very frequently met with, not only in consequence of bilharzia disease, but probably also as a consequence of phosphaturia, which is very common and probably due to the hardness of the drinking water.

Degenerations following Lesions of the Cerebellum and its Peduncles in Monkeys.

Dr. WILLIAM ALDREN TURNER, in conjunction with Professor FERRIER, made the following communication: 1. Removal of a lateral lobe of the cerebellum or section of the superior cerebellar peduncle was followed by degeneration of the brachium conjunctivum into and through the opposite red nucleus, the cells of which were atrophied, and onwards to the ventral part of the optic thalamus. On the other hand, the medullary velum of the superior peduncle contained an afferent cerebellar tract, which, in view of the observations of Loewenthal,[1] Mott,[2] and Tooth,[3] and from collateral evidence after hemisection of the spinal cord, appeared to be the cerebellar termination of the antero-lateral ascending tract of Gowers. 2. Removal of a lateral lobe or division of the middle cerebellar peduncle was followed by diminution in number and size of the transverse fibres of the pons Varolii on the side of the lesion, and atrophy of the cells of the nucleus pontis on the opposite side. 3. Removal of a lateral lobe or division of the inferior cerebellar peduncle demonstrated the existence of an efferent cerebellar tract by way of the corpus restiforme and external arcuate fibres to the opposite inferior olivary body, and of an afferent tract to the cortex cerebelli of the middle and lateral lobes formed by the direct cerebellar tract and the direct fibres from the clavate and cuneate nuclei. 4. Extirpation of the middle lobe of the cerebellum, including its antero-posterior division, occasioned no degeneration in the superior, middle, or inferior peduncles, but was followed by degeneration and sclerosis of the tract which passes from the vermiform process to Deiters' nucleus, "direct Kleinhirn Sensorische Bahn" of Edinger.[4] 5. We were unable to confirm Marchi's statements as to the existence of a direct efferent cerebellar tract in the antero-lateral columns of the spinal cord or of degeneration in the anterior nerve roots, mesial fillet, or posterior longitudinal bundles after cerebellar extirpation. 6. In two cases of lateral lobe extirpation, however, we obtained degeneration in the anterior and lateral columns of the spinal cord respectively, in the position indicated by Marchi.[5] In the case in which there was a marginal degeneration in the anterior column the nucleus of Deiters on the same side was implicated; while in that in which degeneration in the lateral column was present there was a lesion of the tegmentum of the pons Varolii, involving the nucleus of the lateral fillet. The first of these two observations, taken in association with the degeneration of the tract from the vermiform process to Deiters' nucleus after extirpation of the middle lobe, bears out Deiters' original view that this nucleus (large-celled external auditory nucleus) is an internode in the cerebello-spinal system. Secondly, the tract which we have observed in the lateral column of the spinal cord appears to be the spinal continuation of a tract of fibres connected with the lateral fillet which has been described in the medulla oblongata by Flechsig,[6] von Monakow,[7] Held,[8] and Bruce.[9] We have demonstrated the presence of this tract in the pons Varolii, lateral region of the medulla oblongata, and lateral column of the spinal cord at least as far as the sixth thoracic nerve after specially devised lesions of the lateral fillet. 7. Destruction of the clavate and cuneate nuclei was followed by degeneration, on the one hand, through the restiform body into the cerebellum; and, on the other hand, through the middle and internal arcuate fibres to the opposite interolivary layer and mesial fillet. This latter structure was traced to the anterior quadrigeminal bodies and optic thalamus. The fibres from the clavate and cuneate nuclei occupied respectively ventral and dorsal positions in the fillet. 8. The fibres of the direct cerebellar tract end in the middle lobe of the same and of the opposite side.

[1] Revue Médicale de la Suisse Romande, 1885.
[2] Brain, 1892, Part 58, p. 215.
[3] Ibid., 1892, Parts 59 and 60, p. 397.
[4] Zwölf Vorlesungen über den Bau nervöser Centralorgane, 1892, p. 118.
[5] Sull' Origine e Decorso dei Peduncoli Cerebellari e sui loso Rapporti cogli altri Centri Nervosi. Firenze, 1891.
[6] Die Leitungsbahnen im Gehirn und Rückenmark. 1876.
[7] Neurologisches Centralblatt, 1885, p. 265.
[8] Ibid., 1890, p. 481.
[9] Illustrations of the Mid and Hind Brain. Edinburgh, 1892.

MILITARY MEDICINE AND SURGERY.

On the Extension of the Ambulance Movement amongst the Civil Population.

Mr. S. OSBORN, F.R.C.S., chief surgeon of the Metropolitan Corps of the St. John Ambulance Brigade, London, read a paper on the above subject. His object, he said, in bringing this subject forward was to impress upon his hearers the great importance of and the great benefits to be derived from extending the ambulance movement as a means of saving life amongst the civil population. It was more especially his desire to ask them to extend this movement in their several localities as far as lay in their power among the class alluded to. In Italy the ambulance movement instituted by the Italian Society of the Red Cross for military purposes was most perfect, and with regard to that branch he did not venture to suggest anything, as England had much to learn from so well managed an organisation. The same remark applied to Austria, France, Germany, and other countries. England had nothing to compare with any one of them; but in the St. John Ambulance Association for the relief of suffering and in rendering "first aid to the injured" amongst the civil population England had an organisation of which she might justly be proud. It was of this association and the good work it had accomplished that he desired to speak. The advantage of knowing how to render first aid to the injured in every class of life was obvious to all, as accidents were common to everyone and not singular to any. Certain trades and professions, by reason of their nature, were more especially liable to accidents than others; but where danger to life was common to all a knowledge of how to render relief should be equally ready. There were many injuries and complaints which could await the arrival of medical help, and the suffering of these even could be relieved and alleviated by a soothing hand and properly directed effort. There were, however, a very large proportion of cases which were fatal through there being no skilled hand ready to

render that assistance, which must be immediate to be of any use. It was to these cases that efforts should be directed. Medical men were numerous, but not always accessible at a moment's notice, and where danger was imminent and moments meant death many a life could have been saved if some of those around had had a knowledge of how to render first aid to the injured. Hæmorrhage, drowning, syncope, cases of poisoning and fits all called for immediate help. Did medical men, said the speaker, object to this rendering of "first aid to the injured" on the part of non-professional brethren? Amongst right-minded and well-meaning men, No. There had been opposition, but when carefully thought out it had disappeared, as it was sure to do amongst a class of men who live solely with the object of doing the best they can for suffering humanity; for it had been found in no degree to trench upon the province of the medical man. In fact, the knowledge the laity attained tended rather to open their minds to the enormity of their responsibility and to lead them to seek that help which they might otherwise have felt disposed to neglect. If proof was required of the support afforded to this ambulance movement by the medical profession in England it was only necessary to consider the very large number of medical men in all parts of the country who gave their assistance and support to this movement and to whom it was principally indebted for its success. The origin and the successful working of the St. John Ambulance Association in England were very largely due to the services of Mr. J. Furley, a gentleman whose name was well known in Italy as a Commissioner for the Sick and Wounded in many campaigns and as a member of the Red Cross Society. The St. John Ambulance Association, started about sixteen years ago, had obtained great prominence and eminent success. Local centres and classes had been formed in ten districts in London and 108 in the country, in addition to 560 detached classes, besides others in India and the colonies. It would be easy to give numerous instances where knowledge of how to render "first aid to the injured" was invaluable, but a glance at the syllabus drawn up by the medical committee was sufficient to show how well adapted the course of instruction was to meet the requirements of the cases of sudden illness and injury ordinarily met with in every-day life. His lectures had now been printed in English, French, German, Italian, and Japanese, as his desire had been to extend to the utmost the usefulness of the knowledge contained in them throughout the world. What had been done with such success amongst the civil population in England he wished to see done elsewhere. Mr. Osborn, in conclusion, described the working of the St. John Ambulance Association in England.

ODONTOLOGY.

At the first meeting of this section Cavaliere Coulliaux was elected president and Dr. Adler secretary; Mr. J. Howard Mummery and Dr. George Cunningham were elected honorary presidents. Papers of great interest have been read by Warnekros, Ribolla, and others.

Professor MILLER of Berlin made a communication of immediate practical importance as to the possibility of rendering the natural contents of the pulp canals permanently sterile, and so diminishing greatly the length of time involved by their thorough removal. A pastille was placed over the commencement of the root canal containing hydrarg. bichlor., 0·004 gramme, and acid. thymic., 0·006 gramme. An insoluble albuminate of mercury is formed by the action of the remnants on the pulp. This salt is itself a germicide of considerable power.

Dr. CUNNINGHAM of Cambridge gave an interesting address on the results of the Collective Investigation Committee of the British Dental Association as to the condition of the teeth of school children. He advocated strongly the necessity of attention to the teeth of children between the ages of six and twelve as the only way to prevent the dentures being entirely ruined by caries at an early adult age. Both the address and a lively discussion which followed were delivered in French, which is the best means of intercommunication. As a result of the debate it was unanimously resolved to appoint an International Committee to extend the investigations on uniform plans with those designed by Dr. Cunningham in other countries. The demonstrations have not been very successful, but the appliances for the restoration of the palate exhibited for Dr. Martin of Lyons were noticeable.

Artificial Palate and Nose after Syphilitic Destruction.

Commendatore S. ATKINSON (Naples) read a case where the nose proper and the structures forming the nasal fossæ and palatal processes in the neighbourhood had all been destroyed by syphilis, only a large central hole presenting in the face, formed by the inter-communicating buccal and nasal cavities. Not a trace of cartilaginous or bony septum remained, and even the inferior turbinated bones were gone. Dr. Atkinson devised an apparatus for the reparation of this deformity, which he described at length as follows:—An artificial roof to the mouth was constructed of hard caoutchouc bearing teeth, and from this a flap of soft caoutchouc depended posteriorly, simulating the soft palate. Erect upon the artificial roof to the mouth was placed a central cylindrical structure of the same material, and to the anterior surface of this the third part of the apparatus—the artificial nose—was fastened by means of a metal spring. This was also of caoutchouc, but painted flesh colour. The design was perfectly successful. The patient was enabled by it to eat with comfort and speak with distinctness, and there is nothing in the appearance to excite disgust.

HYGIENE.

The Propagation of Cholera.

Dr. LOUIS CSATARY of Csatár, counsellor and sanitary delegate of the General Council of Hygiene of Hungary and of the board of the Hungarian State Railway, made the following communication:—"The civilised world both of men of science and laymen accepts with praise and gratitude the decisions of the International Sanitary Conference of Dresden which have for their object the prevention of the propagation of cholera and at the same time the freeing of passengers and commerce from the obstacles imposed by the superannuated institution of land quarantines and by the senseless prohibitions on merchandise said to be susceptible. To draw lines, to hinder the circulation of persons and merchandise, and to imprison travellers in infected localities and in cabins unsuitable even for the use of cattle—these were the great means by which the invasion and the spread of disease were attempted. As a matter of fact the authorities never succeeded in attaining the object proposed by these extravagances of quarantine, and only last year cholera broke out at Constantinople, in spite of quarantines of from five to ten days, while they caused immense losses to the inhabitants of the countries which they proposed to defend by these illusory means; the workmen could not find work, the shopkeeper was left alone in his shop, the hotels were empty, and the consequent poverty made people ill with greater certainty and in much greater number than an epidemic would have done. The great discoveries in chemistry and bacteriology and in the principles of modern hygiene have cleared the way for more reasonable views and institutions, demonstrating at the same time the uselessness of the exaggerated measures of seclusion and quarantine. The measures recognised as useful by the real experts of science, and which have been verified by experience, for preventing the invasion and spread of cholera and other infectious diseases, are as follows: (1) the maintenance of a state of things favourable to health and the salubrity of the country by hygienic laws; (2) notification and immediate communication of the centres of cholera; (3) severe isolation and disinfection of the first cases; (4) sanitary inspection of travellers, isolation of the sick, and disinfection of the carriages and vessels in which they were travelling; and (5) a rigorous international observation of the places whence cholera can come to Europe. These means are perfectly sufficient for attaining the great end of protecting humanity against such plagues, while the land quarantines have no efficacy whatsoever. Not only healthy and peaceable travellers are subjected to annoyances, but the inhabitants of the countries upon whose frontiers these quarantines are in operation are lulled into a fallacious security and are often enough undeceived by the invasion of the disease, which they had supposed to be shut out at the frontier by cordons—the very place in which it breaks out to demonstrate as it were their useless character. The measures of quarantine applied to travellers on the railways, and especially to those of the Orient express, have absolutely no reason for their existence. The experience of thirty-four years enables me to assert and affirm that it is an event most rare for a traveller to fall ill of cholera during his journey; and, as the duration of incubation is not certainly known, it is perfectly useless to detain travellers either for five or for ten days. There is no State in which the railways are not under medical inspection; any other traveller, therefore, might diffuse the disease with more

probability than the one who travels by railway. The grand express train, which links the West to the East, serves as a means of transport for persons who are at their ease, and it never happens that a person stricken by cholera has been found in this *train de luxe*. Consequently, sanitary reasons could never excuse the prohibitory measures which have been employed for hindering the running of this train as well as that of other trains belonging to different railways. Relying on the preceding considerations, I have the honour of making the following proposition: 'The International Congress of Medical Sciences assembled at Rome declares that the decisions of the International Sanitary Conference of Dresden are in accordance with the principles of medical and hygienic science; consequently the quarantines on land and the restrictions placed on the running of railway trains are useless and injurious. The Congress declares that it is necessary, in the interest of the monarchy, that all Governments without exception accept the decisions of the Dresden Conference.'" The proposition of the learned sanitarian was put to the Congress in the form of a motion and adopted unanimously.

Dr. COLIQUON, delegate of Sume and Monaco, communicated a paper on a cholera epidemic which took place in the summer of 1893 in that district. The principal interest of his paper consisted in the means of disinfection employed to arrest the development of infective germs, and he concluded that through the use of antiseptics and a well-organised sanitary service cholera might ultimately be stamped out.

ANATOMY.

This section is under the presidency of Professor Senatore Francesco Todaro, Professor of Anatomy in the Royal University of Rome. At the opening of the section Professor Todaro delivered an address in Italian, of which the following is an abstract: "Since it is my good fortune to have been chosen to open the Section of Anatomy on the occasion of the meeting of the Eleventh International Congress in the city of Rome, permit me, in the name of all the anatomists of Italy, to give here a cordial welcome to our illustrious *confrères* who have come to take part in this great festival of the science of health. We are proud to have you with us and look forward with pleasure to discussing with you the most simple principles and the highest problems in the domain of anatomy. From your communications, and from the observations which you will make, most useful principles will, I hope and trust, be laid down. We have arrived at the end of the nineteenth century—the century *par excellence* of natural science, and the century of which anatomy has been the mistress and the queen. I, together with all the students of anatomy in the country, rejoice to see here united the masters of our science, the men who have mainly contributed to its progress. In the history of anatomy Rome will to-day make another page, and Rome is a city that has many associations with the science. To Rome from Pergamos came Galen, who saved medicine from its empiricism and placed it upon the solid basis of anatomy; in Rome lived Bartolomeo Eustachio, the great morphologist; in Rome lived the celebrated Andreas Vesalius, who, with Galen, may be said to have founded the science of morphology or minute structural anatomy; and, lastly, here rest the bones of Marcello Malpighi—histologist, embryologist, anatomist, zoologist, and botanist, the greatest biologist of his century. And now, gentlemen, the laurels of Galen, Eustachius, Vesalius, and Malpighi bloom green again for you. I renew my welcome in the name of Rome and of all Italy, and invite you to begin your labours."

PHARMACOLOGY AND THERAPEUTICS.

Action of Salicylic Acids.

The President of this Section, Professor STOKVIS of Amsterdam, read a paper containing an account of his researches into the action of the various salicylates. As Dr. Hoogewerff and von Dorp succeeded in making a new salicylic acid called anthranilic acid (hereafter called A. acid), the action of this acid was compared with that obtained from the oil of wintergreen (hereafter called the W. acid). A third form of salicylic acid was that obtained from phenol (hereafter called the P. acid). On examining the characters of these acids, the chemical composition was found to be identical; but they differed greatly in their physiological action. In regard to their elimination from the body, it was found that the W. salicylic acid was speedily eliminated from the body and caused profuse diuresis. The other acids, while having a similar action, were much less powerful in their effects. In reference to the toxic doses of these compounds, the P. acid and the A. acid provoked slight tremors from time to time, amounting occasionally to convulsions, whereas the wintergreen (W. acid) never caused such symptoms. In man it was found that after the drug had been tried by a student upon himself for some time, taking about four grains three times a day, the effect of all the three forms was to produce headache; but it had no effect on digestion or sleep. Its effect on the temperature was slight, rising a little when the P. acid was administered, and the A. acid had the same effect. When the W. acid was used the effect was almost imperceptible. In reference to respiration its rapidity was increased by the P. acid and by the A. acid, but not when the wintergreen was administered. The lethal dose of the three acids was the same in each case. The three series of experiments showed that when the frog's heart was examined *in situ* the beats were slowed and rendered more powerful. So that, for instance, when the A. acid and the P. acid were employed the heart slowed from 100 to 14 or 16, whereas with the same dose of the W. acid it slowed down only to 28. When the frog's heart was removed from the body and artificial circulation kept up the effect of the W. acid on the heart was much less and was much more quickly removed by replacement of the poisoned blood by fresh blood. Now the question arose how it was that these chemically identical compounds differed thus in their quantitative physiological action. It was explained by the researches of Ostwald and Van t'Hoff that the chemical identity of the acids could only be said to be real when their electrolytic conductive power was identical. Now the electrolytic conductive power of the P. salicylic acid and of the A. salicylic acid was proved by experiment to be nearly alike—e.g., the A. acid 100, 98, 97 for three experiments and the P. acid 100, 97, 98. The wintergreen salicylic acid was found to be 80, 72, 66. The electrolytic conductivity of the W. acid was, therefore, much less than that of the other two, and this showed that the wintergreen salicylic acid was not a pure substance. Further experiments proved that it contained slight traces of the salicylates of methyl. Maclagan and Charteris had come across this fact from a clinical investigation; but they had found the phenol salicylic acid and the A acid to be impure, whereas the impurity existed in the acid derived from oil of wintergreen. Thus, while their clinical observations were correct, their interpretation seemed not to have been correct. It was in artificial salicylic acid the impurity which did good. Thus the accuracy of the clinical conclusions had been completely substantiated by the latest physiological researches. The definite results which had come out of this research were that the new points of view and the new methods of research of chemistry had shown themselves to be trustworthy in the highest degree; while, on the other hand, the difference in the physiological action between the chemically pure salicylic acids derived from phenol and anthranilic acid and the chemically impure salicylic acid derived from wintergreen (gaultheria) had again shown the accuracy of the therapeutic dogma—viz., that now and again impure substances were better adapted for clinical use than pure chemical substances. This admirable research showed that the old physicians in using complex prescriptions had a good deal of right on their side, and that the scorn which had been thrown on the mixtures of drugs in modern times was unjustifiable.

Dr. J. ROUSSEL read a paper on Hypodermic Medicine and on Phosphorus for the Cure of Phthisis. He stated that he had developed his method of subcutaneous injections after he had improved (in 1865) the existing means for the transfusion of blood. This minor operation he had performed more than 200 times with the aid of his "direct transfusor." He had studied on his own person the amount of sulphate of atropine that could be taken by subcutaneous injection, and the first results obtained he had published as far back as 1863. In 1880 he had been able to give with precision the necessary indications for subcutaneous injections of, *inter alia*, salicylate of iron, arseniate of strychnine, sparteine, antipyrin, phosphate of soda, lithine, pilocarpine, cyanide of mercury, and chloride of gold. All these medicaments were administered as aqueous solutions and were injected into the buttock. They caused no pain and proved very active. An aseptic syringe made of celluloid with the needle 0·05 in length was employed in their administration. In 1885 he had described how deep interstitial injections could be given in certain forms of laryngeal inflammation by piercing the

cricothyroidean membrane with a long needle. The process might be accompanied by the insufflation into the trachea of antiseptic powders. Finding that the most active antiseptics —i.e., the volatile and aromatic vegetable essences—could not be injected, because they were caustic and insoluble, he decided to make use of injections of sterilised vegetable oil. He was able in this way to give injections of eucalyptol, menthol, thymol, and geranol in the proportion of 20 per cent., and he could also administer paraldehyde, camphor, carbolic acid, iodine, apiol, &c. He found that creosote-guaiacol and vaseline were injurious and not assimilable. Finally, in 1893, he published a record showing that by means of oily injections phosphorus in doses of five and even fifteen milligrammes could be given and tolerated. This very active poison had become a powerful remedy in cerebral and nervous lesions. He had given a record of the results attained in the treatment of phthisis since 1884 with subcutaneous injections of eucalyptol, arseniate of strychnine, sparteine, phenol, phosphate of iron, &c. He had succeeded in making numerous definitive cures, with a history of restored health extending over five, seven, and nine years, as proved by the disappearance of the Hippocratic nails, by the sign of healing of the cavities, and by the absolute disappearance of the tuberculous bacilli. This last he had set forth by what he considered to be unassailable scientific evidence. "Hypodermic pharmacy now," he concluded, "suffices for all the therapeutic requirements."

LARYNGOLOGY.

The Indications and Limits of Topical Treatment in Laryngeal Phthisis.

Mr. LENNOX BROWNE, F.R.C.S. Edin., made a joint communication with Dr. HERYNG (Warsaw) and Dr. GOUGUENHEIM (Paris) on this subject. They presume that most laryngeal lesions in the course of a pulmonary tuberculosis are tuberculous, and that others may be primarily so. Topical treatment they hold to be indicated, though rarely curative, because of its great value in allaying symptoms. In some cases the process of disease might be arrested. The indications to be considered are: (1) the stage of disease in the larynx; and (2) the stage of disease in the lungs. For hyperæmia, anæmia, and infiltration menthol, iodol, and aristol are employed, and for ulceration and hyperplasia the curette and the application of lactic acid. Punctures and incisions are not advocated, or the extirpation of the arytenoid cartilages. Their personal experience is adverse to tracheotomy. Concurrent measures of hygiene, internal remedies, and suitability of climatic surroundings are essential adjuvants to success.

HYDROLOGY.

On the Sulphur Waters of Great Britain with especial reference to Strathpeffer Spa.

Dr. FORTESCUE FOX read the following communication:—Cold sulphur waters are remarkable for the simplicity of their composition, containing a single important drug which acts (like sulphur itself) in all cases as sulphide, the base being a negligible quantity. In the muriated sulphur waters the effects are overlaid by salines. The warm sulphur waters may be regarded as belonging to the class of indifferent thermals from the minute amount of their sulphurisation. The long-established preference of the French writers for waters containing the sodic fixed sulphide rather than free sulphuretted hydrogen gas was discussed; and Dr. Fox concludes, on the contrary, that the volatility and penetrating properties of the gaseous form gives it great advantages, particularly in the employment of douches and inhalations. The chief British sulphur spas were described and the paper concluded by stating the indications and contra-indications of sulphur, as derived from experience at Strathpeffer Spa. The conditions that benefited by the Scottish waters are: (1) gout in all shapes and stages excepting the acute, (2) the so-called "chronic rheumatism," and the results of rheumatic fever, (3) early rheumatoid arthritis, (4) overloaded and deteriorated condition of blood, common after middle life, especially in women, and giving rise to a multitude of symptoms, (5) hepatic engorgement and enlargement and the conditions dependent thereupon, (6) some skin affections, especially eczema, gouty or otherwise, and (7) chronic catarrhs and "scrofulous" affections.

OPHTHALMOLOGY.

The Ophthalmological Section was well attended by about eighty members. The first paper was by M. GAYET of Lyons, who gave an account of the Ocular Complications occurring in cases of Infectious Endocarditis.—The second was a case by Mr. POWER of Aneurysm of the Orbit occurring after a Gunshot Wound. Serious hæmorrhage followed the bursting of the aneurysm about thirteen weeks after the accident. The common carotid artery was ligatured, and recovery took place with complete atrophy and almost complete loss of vision on the left or injured side.—M. DUFOUR of Lausanne gave the details of a case of Colour Blindness presenting several singular features.—M. SULTZEN described a Modification of the Electro-magnet intended to facilitate the extraction of particles of steel from the interior of the eye.—M. VIGUES read a paper on Ocular Tuberculosis. Many of the authors of papers failed to put in an appearance owing to the difficulty experienced in ascertaining where the papers were going to be read.

THE INTERNATIONAL SANITARY CONVENTION OF PARIS.

THE International Sanitary Conference of Paris, after sitting off and on for a period of nine weeks, has come to a conclusion, and the resulting Convention has been signed by all the delegations present except that of Turkey and that of the United States. For our present purposes the attitude of the British delegation—which included a representative of British India—is the most important; for the objects of the Conference were so largely concerned in our national interests both in India in connexion with the Mussulman pilgrimage, and in the Persian Gulf, where the navigation is nearly all carried on under the British flag, that difficulties were likely to arise at any moment. Some of these difficulties were of a substantial character, and, as already announced, Dr. Thorne Thorne returned from Paris last week to confer with the representatives of the Foreign Office, the India Office, the Colonial Office, and the Board of Trade before the date for the signature of the Convention was decided on. Great Britain has in the end been able to authorise her delegates to sign the Convention; but in so doing the Government have made certain reservations on matters of Imperial importance as to which they were unable to give their assent at the present moment. But a period of one year will elapse before the final ratification of the treaty, and our Paris correspondent informs us that a hope is expressed on the part of the French that the British reservations, which are three in number, will not all be maintained.

The Conference divided its labours into three branches. The first had to do with the whole question of the Mecca pilgrimage both from the East and from the Mediterranean, and it was dealt with by a "Red Sea Committee." The idea was to carry out such regulations at ports of departure, during the voyage, and on arrival in the Hedjaz, as would prevent any cholera reaching the Holy Places either from India and the Dutch Indies on the one hand, or from the basin of the Mediterranean whenever that disease prevailed in the west. Great Britain and India have willingly consented to have all intending pilgrims subjected to medical examination before starting; to maintain them under medical supervision between Indian ports and Aden, and to report the result at the latter place, where any infected vessel would be adequately dealt with; to insist on having a properly qualified medical man on board every pilgrim vessel; to increase the space allotted to pilgrims on board; and to enforce very substantial fines for any breach of a large number of regulations affecting the voyage. In return for this they claimed a diminution of restrictions in the Red Sea, and they condemned in no very measured terms the cruel and evil results following the quarantine imposed on pilgrims in the island of Camaran before disembarking at Jeddah. The result has been a decision of the Conference calling upon the Turkish Government to discontinue putting healthy vessels into quarantine, and admitting for the future only a short detention of forty-eight hours in order to examine the pilgrims and disinfect their personal effects. The Turkish Government have also undertaken to erect decent buildings on the island for the reception of the pilgrims, and also to arrange for an improved water-supply and better sanitary arrangements. Much the same arrangements have been made as to pilgrims reaching the Red Sea from the north, and the Turkish delegates have also assured the Conference that measures are now being adopted to improve the sanitary

conditions of Jeddah and Mecca. Some of the details of these measures have considerable interest, but we defer further comment on them until the actual clauses of the Convention are published.

On one point our delegates were firm. They declined to make it a condition of departure for the pilgrimage that the intending pilgrim should prove that he was in possession of adequate means for his journey to and fro and for his proper maintenance in the Holy Places. Such a requirement, it was held, would involve a distinct interference with the performance of a religious rite on the part of a large proportion of the 60,000,000 Mussulman subjects of the Queen. The clause as to this is therefore not signed on behalf of Great Britain and British India.

The second branch of the work of the Conference was prepared by a committee called the "Persian Gulf Committee." It proposed to transfer from Bassorah on the Euphrates to Fao at the mouth of the Shat-el-Arab, the principal quarantine station for the Gulf, and to carry out there a system of inspection and detention under observation much on the lines of the arrangements laid down in the Dresden Convention. It was also intended to establish at different points along the Gulf a series of sanitary stations. The British and Indian delegates all along declared that this was not a route by which cholera was so likely to travel as to justify a serious hindrance to commerce; and since the scheme involved in addition a number of territorial and other allied questions, the British delegation have refused to accept the decisions of the Conference on this subject. Whether at a later date England will recede from this position will probably depend on further consideration of the subject after the return of the British delegation to England.

The third branch of the work was undertaken by a committee of "ways and means." The work of this committee was arduous and complicated, and it was necessarily to a large extent uninteresting. But it was important. It has decided what the Turkish Government are bound to do in return for the almost endless taxes they impose on the pilgrims; it has set out how the Council of Constantinople should spend some of their receipts; and, above all, it has come to an almost unanimous decision that a new body is to be formed within the Council of Constantinople to administer and carry out the terms of the Convention. No country is to be represented on this body unless it has accepted the terms of the Venice, Dresden, and Paris Conventions, and thus there will be elimination of those representatives who are delegated by quarantining countries. No conclusion arrived at is more important than this one.

The country is certainly to be congratulated on the results of the Conference. We have assented to a number of conditions, especially at Indian ports of departure, which some may not deem to be absolutely necessary, but which will in the end tend to improve the health of the pilgrims; we have gained very substantial reductions for the pilgrims in the matter of quarantine detentions and sanitary improvements; and we shall have secured a body to carry out the various requirements who will be imbued with modern notions of sanitation. This, too, is the first instance in which Great Britain has felt able to authorise her delegates to sign a convention dealing with cholera and international sanitary progress during the actual sittings of the Conference.

The Convention was signed on April 2nd by Mr. E. Constantine H. Phipps, secretary of the British Embassy, Dr. Thorne Thorne, and Surgeon-General Cuningham.

THE REVISION OF THE EXAMINATION IN ELEMENTARY BIOLOGY AT THE CONJOINT BOARD.

THE following is the revised synopsis of the examination in elementary biology which will come into force and apply to all candidates on and after Oct. 1st, 1894:—

Elementary Biology in the Examinations of the Conjoint Board in England.

1. The chemical composition and properties of protoplasm; the structure and properties of cells; cell-division; the general outlines of the varieties of cell-structure in the tissues of animals and plants.

2. The structure and life-history of *Amœba*, *Vorticella*, *Protococcus*, and *Spirogyra* as illustrative of (*a*) the differences between plants and animals, (*b*) the general phenomena of the life-history of low organisms.

3. The structure and mode of life of saccharomyces and bacteria; fermentation; putrefaction; modes of spread of bacteria.

4. The relations between multicellular and unicellular animals, as illustrated by a comparison of the structure, physiology, and life-history of *Hydra* and *Amœba*.

5. The *Cœlomata-Invertebrata*, as illustrated by the anatomy of *Lumbricus*.

6. The *Cœlomata-Vertebrata*, as illustrated by a comparison of the general characters of the skeleton, and of the digestive, circulatory, respiratory, genito-urinary, and nervous systems of the dogfish and the frog.

7. The structure of ova and spermatozoa; fertilisation; the early stages of development; the formation of the segmentation-cavity, of the gastrula, archenteron, and cœlom, and of the epiblast, mesoblast, and hypoblast, with an enumeration of the chief systems of organs derived from the three layers in a vertebrate.

We have nothing but commendation for this revision of the schedule, which brings the examination nearer into touch with the "Preliminary Scientific" of the London University curriculum, but it is, of course, not so extended nor so difficult.

CHOLERA.

CASES of cholera continue to make their appearance in Constantinople. Following the fatal case of M. Forni, general director of the Tobacco Monopoly Company, whose attack was popularly ascribed to some oysters of which he had partaken, another case, which also terminated fatally, occurred in an official of the same company. It is stated that a servant in the household of the Greek Minister has also been attacked and that other seizures have taken place in Constantinople. As we have already said, recrudescences of the disease at this season are not at all uncommon in countries and places where cholera has already previously made its appearance. The correspondent of the *Standard* reports that there were seven cases, five of which proved fatal, in Constantinople on Wednesday last.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Whitechapel Urban Sanitary District.—Dr. Loane prefaces his annual report for 1893 with several tables from last census returns which have reference to his district. He draws attention especially to the figures regarding foreign emigration, and compares them with those of the 1881 census. It appears that of 39,307 foreigners present in the East-end parishes on the last census night no less than 17,961 were returned as belonging to Whitechapel. Regarded from the standpoint of Russians and Russian Poles alone, the pre-eminence of Whitechapel is even more remarkable still, as this district at last census possessed 13 538 as compared with 10 213 distributed over all the other East-end parishes. The subjoined figures which tell their own tale, will, we think, be of interest to our readers.

Foreigners residing within the Whitechapel District.

	Census, 1881.		Census, 1891.
Russian Poles	4458	Russian Poles	7171
Russians	835	Russians	6367
Dutch	1850	Dutch	1434
Germans	1805	Germans	1651
Austrians	903	Austrians	710
Other Nations	509	Other Nations	628

Coming to the year 1893, Dr. Loane tells us that he received from the medical officer of health of the Port of London notices of 3386 immigrants who arrived in the district and were taken charge of by the committee of the Jewish shelter in Leman-street; and that out of this number no less than 1926 settled in the district. The birth-rate of Whitechapel for 1893 was 40·9, and the death-rate 25 per 1000; the infantile mortality was 164 per 1000 registered births. In

speaking of small-pox, Dr. Loane observes that the history in many of the cases showed that the disease was contracted "elsewhere than at the address given on the notification form." Referring to the deficient isolation accommodation in the metropolis during the past year, Dr. Loane states that apparently the officials at Norfolk-house decided which cases were to have priority of removal, whereas it would have been better had this point been decided by the medical officers of health. Certainly this seems to be a very reasonable contention. In several cases so many unsuccessful applications for admission were made to Norfolk-house that when at last the required beds could be obtained some of the parents refused to have their children removed. It appears, indeed, that in many cases if a child is not removed during the first alarm the parents are led by the mildness of the attack to regard all danger as over, and we are afraid many of them do not take the public safety into their consideration. There seems to have been during the prolonged drought of last summer considerable inconvenience caused by the scarcity of water through that part of the district that was supplied by one of the water companies; and the inconvenience was, Dr. Loane states, enhanced by the fact that this water company is only compelled to provide such pressure as will raise the water forty feet above the pavement level. The chief sufferers were apparently the tenants of the upper flats in model dwellings; indeed, so great was the inconvenience that memorials were eventually forwarded to the London County Council in regard to the matter. In the appendix to Dr. Loane's report are to be found numerous statistical and other tables of the work done by the sanitary inspectors, and also copies of the London County Council and the Whitechapel Board of Works' By-laws, framed under the provisions of the Public Health (London) Act, 1891.

Coventry Urban Sanitary District.—We learn from Dr. Mark Fenton's report that Coventry was constituted a separate county by charter of Henry VI. in 1451, that in 1842 it was incorporated with the county of Warwick, and in 1888 it was again constituted a separate county. Dr. Fenton gives the census figures for his district from the earliest records down to the present. In 1801 the population was 16,034, and has steadily increased down to the last census, when it was 52,720. In discussing the causes of infantile mortality, which in this district was 160 per 1000 births, Dr. Fenton remarks, with reference to the large number of deaths from infantile diarrhœa which occurred during the hot weeks of last year, that "it would appear that high temperature acting upon milk or artificial food, probably by enhancing conditions suitable to the growth of pathogenic organisms, more especially in insanitary, ill-ventilated, and overheated homes, is the main cause of the disease." With regard to small-pox, Dr. Fenton records that one group of cases arose from a person who had apparently contracted the disease elsewhere. This patient, on arriving at Coventry, obtained work at a cycle manufactory; but, on feeling ill four days after his arrival, consulted a druggist, who apparently treated him, but not for small-pox, and after four days at home the patient returned to his work. The next case that arose from this first one also consulted the druggist, and daily attended his work until his landlady insisted upon his seeing a medical man. Altogether there arose eight cases of small-pox from the first case, all of whom might probably have escaped attack had proper precautions been taken in regard to the first case which occurred. Dr. Fenton also insists upon the importance of placing some restrictions upon the movements of tramps when small-pox is present, the disease having been introduced by this means into the workhouse at Coventry four times in the same number of months. The guardians of Coventry in 1891 passed a resolution to disregard the compulsory clauses of the Vaccination Act, and one of the results is that in 1893 no less than 1304 of the 1630 children born during the year were unvaccinated.

Barnstaple Urban Sanitary District.—Dr. Mark Jackson reports that in this district, having an estimated population of 13,205, there were 30 deaths from diphtheria. The cases, which occurred for the most part in August and September, and concerning which a special report was asked for by the Local Government Board, were divisible into two groups—in the one, those attacked were chiefly children, and the disease was spread, it appears, mainly through school attendance; in the other, the attacks were not confined to children, and no school influence could be detected. After further considering the outbreaks, Dr. Jackson observes: "It is a question, too, whether periodic medical inspection of all elementar schools should not be enforced. The State now compels attendance at school of all children of a certain age, and I do not see how, logically, it can escape the further responsibility of seeing that this duty can be obeyed without the least risk to the life and health of the children."

Carnarvonshire Combined Sanitary District.—The medical officer of health for this district is Mr. Hugh Rees, but the annual report for 1893 has apparently been drawn up for him by Dr. P. Fraser. This district comprises thirteen urban and six rural sanitary districts, having a total area of 584,435 square acres and a population, estimated to midsummer, 1893, 164,052. Comparing the rural with the urban districts, the former yielded a death-rate of 19·8 per 1000 and the latter 21·7, while the zymotic death-rate in the rural districts was 1·44 per 1000, and in the urban 1·73. The infantile mortality stated in relation to the registered births was 132 per 1000 in the rural districts and 171 per 1000 in the urban. During the year two sanitary authorities have adopted the Notification Act, making a total of fifteen out of the seventeen districts in the combination. There were 1436 cases of infectious disease notified during the year, and the method adopted with regard to such cases is this. A copy of the notification is at once sent to the sanitary inspector of the district from which the notification comes, who immediately makes inquiries at the house, leaving at the same time a handbill, which has recently been drawn up in Welsh and English, setting forth the precautions to be taken; the inspector also fills up an "inquiry form" and forwards it to the medical officer of health, who judges from it of the necessity for further action. Attempts have recently been made in the district by the joint sanitary committee to provide a course of lectures to sanitary inspectors, but it was held that expenditure for such a purpose could not be legally incurred by the sanitary authority. A proposal to obtain a grant from the Merionethshire and Carnarvonshire County Councils for the purpose has not been successful, owing to the council of the latter county not being willing to coöperate.

Aberavon Urban Sanitary District.—There were nine cases of small-pox notified in this district during 1893. The first case was an imported one, which developed at an inn in the district, and there being no isolation hospital to which the patient could be removed, an attempt was made to isolate him at the inn, although the business of the establishment was still carried on, "without communication with the patient and his attendants." It is not surprising under these circumstances to hear that one of the customers contracted a fatal attack and communicated the disease to his son. The next group of cases which occurred seems to have originated through the agency of a convalescent small-pox patient discharged from a small-pox hospital in Kent, although apparently the patient was confined to hospital for a month. This man infected either directly or indirectly fourteen cases, some of which were notified during the present year (1894). Mr. Arnallt Jones, the medical officer of health, points out to his sanitary authority that without a hospital it is "positively hopeless" to attempt the isolation of small-pox, and that without a proper disinfecting apparatus the expensive alternative of destroying clothing and bedding has to be resorted to. Mr. Jones also reports that in no cases did revaccinated persons acquire small-pox however much they were brought into contact with the disease either as nurses or attendants

Barnsley Rural Sanitary District.—Dr. M. T. Sadler states, in his annual report for 1893, that in dealing with small-pox he was authorised by his sanitary authority to engage the public vaccinator to revaccinate at their own homes, and at the expense of the sanitary authority, any persons who had been exposed to infection. Dr. Sadler found this provision of very great assistance to him, and it must certainly have relieved him of much anxiety. Considerable advance seems to have been made during the year in the matter of water-supply to several parts of the district, and the question of sewage disposal has received much attention. The activity as regards sewerage appears in large part at least to have been the result of a conference between the sanitary committee of the West Riding County Council and the sanitary authorities of the basin of the Dearne and the Dove.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5969 births and 4010 deaths were registered during the week ending March 31st. The annual rate of mortality in these towns,

which had been 19·2 and 19·8 per 1000 in the preceding two weeks, further rose last week to 20·0. In London the rate was 20·8 per 1000, while it averaged 19·4 in the thirty-two provincial towns. The lowest rates in these towns were 12·2 in Portsmouth, 14·5 in Bristol, 15·0 in Leeds, 15·3 in Derby, and 15·4 in Brighton; the highest rates were 22·7 in Manchester, 23·7 in Plymouth and in Birkenhead, 24·5 in Liverpool, and 25·8 in Salford. The 4010 deaths included 612 which were referred to the principal zymotic diseases, against 448 and 480 in the preceding two weeks; of these, 210 resulted from measles, 158 from whooping-cough, 96 from diphtheria, 51 from scarlet fever, 46 from "fever" (principally enteric), 40 from diarrhœa, and 11 from small-pox. The lowest death-rates from these diseases were recorded in Portsmouth, Brighton, Hull, and Sunderland, and the highest rates in Birmingham, Salford, West Ham, Liverpool, and Birkenhead. The greatest mortality from measles occurred in Leicester, Liverpool, London, Birmingham, and Birkenhead; from whooping-cough in Bolton, Salford, Bristol, Sheffield, Birkenhead, and Cardiff; and from "fever" in Norwich. The mortality from scarlet fever showed no marked excess in any of the large towns. The 96 deaths from diphtheria included 57 in London, 7 in Manchester, 5 in West Ham, 4 in Birmingham, and 3 each in Cardiff and in Burnley. Five fatal cases of small-pox were registered in West Ham, 3 in Birmingham, and 1 each in Bristol, Manchester, and Oldham; but not one in London or in any other of the thirty-three large towns. There were 81 small-pox patients under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital at the end of the week, against 87 and 85 on the preceding two Saturdays; 14 new cases were admitted during the week, against 20 and 17 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 2117 on Saturday last, against 2153, 2107, and 2103 at the end of the preceding two weeks; 215 new cases were admitted during the week, against 222 and 233 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 373 and 397 in the preceding two weeks, declined to 347 last week and were 103 below the corrected average. The causes of 74, or 1·8 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Plymouth, Bristol, Leicester, Bradford, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 21·1 to 18·7 per 1000 in the preceding three weeks, rose again to 20·5 during the week ending March 31st and was 0·5 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·3 in Paisley and 15·8 in Edinburgh to 22·3 in Glasgow and Dundee, and 29·1 in Perth. The 584 deaths in these towns included 39 which were referred to whooping-cough, 18 to diarrhœa, 9 to scarlet fever, 9 to "fever," 5 to diphtheria, 4 to measles, and one to small-pox; in all, 85 deaths resulted from these principal zymotic diseases, against 65 and 58 in the preceding two weeks. These 85 deaths were equal to an annual rate of 3·0 per 1000, which almost corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 30 and 32 in the preceding two weeks, further rose to 39 last week, of which 17 occurred in Glasgow, 8 in Edinburgh, and 5 in Aberdeen. The deaths referred to different forms of "fever," which had been 8 and 3 in the preceding two weeks, rose again to 9 last week, all of which were recorded in Glasgow. The 9 fatal cases of scarlet fever exceeded by 3 the number in the preceding week and included 3 in Glasgow, 2 in Paisley, and 2 in Perth. The deaths from diphtheria, which had been 8 in each of the preceding two weeks, declined to 5 last week. Of the 4 fatal cases of measles, 3 occurred in Dundee; and the death from small-pox was recorded in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 106 and 111 in the preceding two weeks, were 113 last week and were 25 below the number in the corresponding week of last year. The causes of 31, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·8 and 29·4 per 1000 in the preceding two weeks, further rose to 32·2 during the week ending March 31st. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 31·5 per 1000, against 21·2 in London and 18·5 in Edinburgh. The 216 deaths in Dublin during the week under notice showed an increase of 19 upon the number in the previous week and included 15 which were referred to the principal zymotic diseases, against 9 and 16 in the preceding two weeks; of these 5 resulted from whooping-cough, 4 from "fever," 3 from diarrhœa, 1 from measles, 1 from scarlet fever, 1 from diphtheria, and not one from small-pox. These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 3·7 in London and 2·5 in Edinburgh. The fatal cases of whooping-cough, which had declined from 7 to 3 in the preceding four weeks, rose again to 5 last week. The deaths referred to different forms of "fever," which had steadily declined from 5 to 1 in the preceding five weeks, rose again to 4 last week. The mortality from measles and from scarlet fever showed a decline from that recorded in the preceding week. The 216 deaths registered in Dublin last week included 35 of infants under one year of age and 64 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in any recent week. Thirteen inquest cases and 8 deaths from violence were registered; and 73, or rather more than a third, of the deaths occurred in public institutions. The causes of 16, or nearly 8 per cent., of the deaths in the city last week were not certified.

NATURAL INCREASE OF POPULATION IN ENGLAND AND FRANCE.

During 1893 the natural increase of the population in the United Kingdom by excess of births over deaths exceeded 400,000, of which no less than 345,000 occurred in England and Wales. In France, on the other hand, there was a decrease of population of more than 20,000, due to the excess of deaths over births. Notwithstanding the general decline of the English birth-rate in recent years the excess of births over deaths has been fairly maintained by the decline in the death-rate. In France the excess of births over deaths has continuously declined in recent years, but the excess of deaths over births in 1893 was mainly the exceptional result of an unusually high death-rate, due to the mortality from influenza. There may be room for doubting the value to this country of the high rate of increase of population that prevails, but so far as it is due to the low rate of mortality it may be regarded with unqualified satisfaction, implying as it does a generally improved standard of health condition in the population.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAINS KIDDLE AND CALLAGHAN have left Cyprus for England. Surgeon-Major Sandiford has been transferred from Limerick to Cork. Surgeon-Major Hunt and Surgeon-Captain McCormack have resumed their duties at Woolwich on return from leave. Surgeon-Captain D. Bruce is posted to the Medical Division of the Royal Victoria Hospital, Netley, for duty in relief of Surgeon-Captain Hearn, appointed Acting Adjutant, Medical Staff Corps. Surgeon-Captains Trotter and Saunders have arrived from India in the *Bothnia* on completion of a tour of foreign service. Brigade-Surgeon-Lieutenant-Colonel Cogan and Surgeon-Captain Dick have left the Straits Settlements for England. Surgeon-Captain Daly has been granted sick leave from Malta. Surgeon-Major Nicholson has arrived in England from Hong Kong, and Surgeon-Captain Stalkartt has been granted leave from India. Surgeon-Majors Wolseley and Hoysted have resumed their duties in the North-Western District on return from leave, and Surgeon-Lieutenant Tyrrell has rejoined at Aldershot.

INDIA AND THE INDIAN MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Sinclair, M.B., I.M.S., Surgeon-Lieutenant-Colonel J. D. Edge, M.D., A.M.S., and Surgeon-Major S. H. Browne, M.D., I.M.S., are appointed Hon. Surgeons on the Viceroy's Personal Staff. Surgeon-Major J. Lewtas, M.D., I.M.S. (Bengal), is appointed to officiate as Statistical Officer to the Government of India

in the Sanitary and Medical Departments during the absence, on furlough, for one year of Surgeon-Lieutenant-Colonel D. Wilkie, M.B., Brigade-Surgeon-Lieutenant-Colonel J. B. Gaffney, Officiating Civil Surgeon, Jubbulpore, is confirmed in that appointment from Jan. 27th, 1894. Surgeon-Captain J. G. Hojel, M.B., B.S, acts as Second Physician and Registrar, Jamsetjee Jejeebhoy Hospital, during the absence of Surgeon-Captain L. F. Childe, M.B. During the absence of Surgeon-Major W. K. Hatch, M.B., C.M. (Aberd.), F.R.C.S. (Lond.), Surgeon-Major R. Manser, M.D., acts as Senior Medical Officer, Jamsetjee Jejeebhoy Hospital, and Surgeon-Major D. C. Davidson acts as Senior Surgeon to the same hospital. Surgeon-Major A. Keogh, M.D., A.M.S., on arrival from England, has been appointed to the Medical Charge of the North Station Hospital, Bangalore, and Surgeon-Major P. M. Carleton, M.D., Rangoon District, has been appointed to the Medical Charge of the Station Hospital, Madras. The services of Surgeon-Captain G. G. Giffard, I.M.S., are placed temporarily at the disposal of the Public Works Department. Surgeon-Captain H. Herbert and Surgeon-Lieutenant-Colonel S. M. Salaman, M.D., F.R.C.S., have respectively delivered over and received charge of the Yerrowda Central Gaol. Brigade-Surgeon-Lieutenant-Colonel George Cumberland Ross and Brigade-Surgeon-Lieutenant-Colonel William Pleace Warburton, M.D., are promoted to Surgeon-Colonels. The following have leave: Surgeon-Colonel J. G. Pilcher, Inspector-General of Civil Hospitals, Bengal, Officiating Inspector-General of Civil Hospitals, North-West Provinces and Oudh, for eight months; Brigade-Surgeon-Lieutenant-Colonel, the Hon. A. S. Lethbridge, M.D., C.S.I., General Superintendent of Thagi and Dacoiti, for 243 days; Surgeon-Captain D. Prain, M.B., Curator of the Herbarium, Royal Botanic Garden, Calcutta, for eight months; Surgeon-Major J. O'Neill, Civil Surgeon, Gurdaspur, for one year and six months; and Surgeon-Captain F. J. Drury, Resident Physician, Medical College Hospital, and Professor of Pathology, Medical College, Calcutta, for three months. Her Majesty's approval to the promotion of Surgeon-Lieutenant-Colonel Edward Reginald Johnson, to Brigade-Surgeon-Lieutenant-Colonel, Bengal Medical Establishment, is gazetted (dated Oct. 1st, 1893).

NAVAL MEDICAL SERVICE.

The following appointments to the *Undaunted* are announced: Thomas R. Pickthorn to be Staff-Surgeon; Daniel J. P. M'Nabb to be Surgeon; Staff-Surgeon G. S. Smith to the *President*, and Surgeons F. A. Capps to the *Triton*, and P. Lord to the *Research*, both lent.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel R. Bradshaw, 5th Battalion, the Connaught Rangers, resigns his commission; also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

YEOMANRY CAVALRY.

Nottinghamshire (Sherwood Rangers): Surgeon-Captain E. Martyn resigns his commission; Christopher Flemming, Gent., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 2nd Kent: Surgeon-Major R. Gooding, M.D., to be Surgeon-Lieutenant-Colonel. — *Rifle:* 2nd Volunteer Battalion, the Royal Fusiliers (City of London Regiment): George Trew Cattell, Gent., formerly Surgeon-Lieutenant, to be Lieutenant.—1st Volunteer Battalion, the Gloucestershire Regiment: Surgeon-Lieutenant H. Skelton, M.D., resigns his commission.—1st (Cumberland) Volunteer Battalion, the Border Regiment: Captain Samuel Braithwait is appointed Surgeon-Lieutenant. — 22nd Middlesex (Central London Rangers): George Rory John Fletcher, Gent., to be Surgeon-Lieutenant.—1st Volunteer Battalion, the York and Lancaster Regiment: Julius Hamel, M.B., to be Surgeon-Lieutenant.

ARMY MEDICAL OFFICERS AND ENTERIC FEVER.

The following excellent instructions for the guidance of medical officers when reporting on cases of enteric fever have been issued to the medical officers of the army from the headquarters of the Army Medical Staff: 1. Full report on water supply. 2. Milk supply; its source, and, if possible, the condition of the cows and the farmstead from which it is obtained; whether it passes through other hands before delivery to the barracks, and if any adulteration with water is suspected. 3. The condition of quarters as to sanitary state, drainage, &c.; also that of the immediate neighbourhood. 4. The movements of the patient for a few weeks prior to attack, whether on furlough or not, should be ascertained (the patient himself might give valuable information on this subject), and information as to his habits, whether steady or otherwise, obtained from his commanding officer. 5. If patient has frequented any particular public-house or drinking-shop, the medical officer of health should be asked as to its water-supply and general sanitary conditions; if unsatisfactory, the officer commanding should be advised to "put it out of bounds." 6. In garrisons and camps, where hawkers of various kinds of foods, drinks, ice creams, &c., are allowed passes to admit them, efficient supervision over them should be maintained, and, if considered necessary, commanding officers requested to cancel their passes.

VOLUNTEER OFFICERS' DECORATION.

This decoration has been conferred upon the undermentioned officers of the Volunteer Force: *Woolwich District: Rifle:* 3rd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Surgeon-Lieutenant-Colonel William Robert Smith, M.D. — *Western District: Rifle:* 1st (Exeter and South Devon) Volunteer Battalion, the Devonshire Regiment: Surgeon-Lieutenant-Colonel John D. Harris, retired.

ASSISTANT PROFESSOR OF PATHOLOGY, ARMY MEDICAL SCHOOL, NETLEY.

Surgeon-Captain David Semple, who took over his appointment as Assistant Professor of Pathology on March 26th, was educated in the Queen's University, Ireland, taking the M.D. with honours in 1881. In 1892 he took the D.P.H. at Cambridge. He received his commission on Feb. 3rd, 1883, and has done one tour of Indian service, during part of which he was Staff-Surgeon at Calcutta. During the last year he has been working in the Netley Laboratory.

Five invalids left Cyprus on March 12th in the s.s. *Dunkeld* for conveyance to Netley.

Correspondence.

"Audi alteram partem."

"DEATH UNDER NITROUS OXIDE GAS."

To the Editors of THE LANCET.

SIRS,—The letter of Sir George Johnson in THE LANCET of March 31st will, I feel sure, attract considerable attention. It is partly devoted to a description and explanation of the vascular changes which are brought about when nitrous oxide gas is administered free from oxygen, and partly also to suggestions for the treatment of the arrested breathing which may, under certain circumstances, arise during or after such an administration. Concerning the vascular changes which take place under nitrous oxide gas I shall say but little, as I am more particularly desirous of referring to the prevention and treatment of the suspended respiration which may arise under nitrous oxide gas when it is given in the customary manner—i.e., free from oxygen. It is not only the fortune, but the misfortune, of nitrous oxide gas to be the safest general anæsthetic known. The misfortune is apparent in the fact that no attempts of a widespread character have been made to reduce the already small death-rate of this anæsthetic. This is surprising, and perhaps blameworthy, when we reflect that we have in oxygen the physiological antagonist to the wholly unnecessary and occasionally dangerous symptoms which attend the administration of nitrous oxide gas by the customary method. In the remarkably few fatalities which have arisen under nitrous oxide gas, suspended respiration has been the most prominent of all features, and it is therefore to the causation, prevention, and treatment of this state that we must direct our attention. I have elsewhere pointed out that even under ordinary circumstances when a full dose of nitrous oxide gas free from oxygen is given there is a tendency, more especially in certain types of patients, to occlusion of the air-way, a tendency which arises from the larynx being spasmodically and intermittently drawn up to meet the epiglottis. This intermittent elevation of the larynx comes on with other

clonic muscular movements, and, like them, usually quickly passes off when air is admitted by the removal of the anæsthetic. But under certain circumstances—e.g., if the gas is given for too long a time, or if certain local conditions favourable to the continuance of obstruction are present—the occlusion persists. Venous engorgement with consequent swelling is one of these favouring conditions, and such engorgement is most liable to lead to obstruction in plethoric, stout, or bloated subjects, or when pre-existing narrowing of the air-tract is present. The fact that in two of the recorded cases of death under nitrous oxide gas enlargement of the tonsils was present is significant in this connexion. Fixity or lessened mobility of the lower jaw, rendering the removal of the epiglottis from the larynx difficult or impossible by the usual means—viz, pushing the lower jaw forward—is another condition favourable to the persistence of obstruction. No doubt general respiratory spasm, or respiratory paralysis without obstruction or spasm, may be a factor in the causation of suspended breathing under nitrous oxide gas in some cases; but there is good reason to believe that mechanical occlusion of the air-way, brought about in the first instance by spasm of muscles capable of raising and fixing the larynx (the spasm being part of a more or less general condition), is the chief factor in most cases.

Respiratory arrest under nitrous oxide gas may be regarded as the penultimate link in a definite chain of symptoms indicative of oxygen deprivation. The last link is cardiac failure. The antecedent links are cyanosis, increasing acceleration of pulse, wide dilatation of the pupils, clonic and tonic muscular spasm in various parts, and guttural stertor, tending, under certain circumstances which have just been suggested, to pass into obstruction. All these symptoms are merely incidental to the administration. They do not contribute to the anæsthesia, for the admixture of oxygen with the nitrous oxide gas prevents them without interfering with the anæsthesia. In fact, the anæsthesia is rendered deeper owing to the possibility of introducing into the circulation quantities of the anæsthetic gas which, in the absence of oxygen as their vehicle, cannot be introduced owing to the respiratory obstruction and spasm which arise in the absence of oxygen.

Sir George Johnson has not referred to the use of oxygen with nitrous oxide gas. It is true that this method is a modern development in anæsthetics which can only hope to find favour, at all events at present, with those who very frequently administer nitrous oxide gas. But this is no argument against the addition of oxygen whenever practicable and whenever the circumstances of the case seem to call for it. As is well known, we are indebted to the late Paul Bert for the suggestion of administering oxygen with the anæsthetic gas. But, curiously enough, both experiment and practice led this distinguished observer to regard an increase in the atmospheric pressure (which he obtained by conducting the administration inside an air-tight chamber) as essential to success, and owing to this fact the method gradually fell into disuse. Within recent years, however, it has been found that, when certain details are attended to, this increased atmospheric pressure is really not necessary, at all events for brief operations such as the bulk of those in dentistry and orthopædic surgery. A proper proportion of oxygen may, in fact, be advantageously administered with nitrous oxide gas, by a comparatively simple apparatus, in almost every case requiring the anæsthesia obtainable by the latter gas, excepting of course those cases in which nitrous oxide gas is used to precede ether. In certain patients, such as those addicted to alcohol, morphine, &c., the use of oxygen in the proportion necessary to obviate cyanosis and stertor may interfere with good anæsthesia, and in such cases either small proportions of oxygen should be given or none at all. But in something like 90 per cent. of all cases the method in question is so advantageous that personally I should not think of reverting to what I now consider to be a crude and unscientific method of producing nitrous oxide gas anæsthesia.

The differences between the phenomena produced by nitrous oxide gas *per se* on the one hand, and nitrous oxide gas with oxygen on the other, acquire no little significance when considered in conjunction with Sir George Johnson's observations. The swelling of the tongue, tonsils, and adjacent parts, the obstructive stertor, and the small, quick, radial pulse, which are one and all to be explained by the great accumulation of blood in the venous system when nitrous oxide gas is given free from oxygen, cease to manifest themselves when the gas is given, as it should be given, with oxygen. We have in oxygen the very factor which is necessary to render nitrous oxide gas a more available anæsthetic, and one which deprives it of its one drawback—viz, its asphyxiating properties; so that I think we may say that when the two gases are so given that no obvious asphyxial complications arise, the use of nitrous oxide gas is rendered obviously free from risk to life.

I am, Sirs, yours truly,

FREDERIC HEWITT.

George-street, Hanover-square, April 3rd.

"CHILD LIFE IN THE SICILIAN SULPHUR MINES."

To the Editors of THE LANCET.

SIRS,—I have read your annotation of March 10th upon child life in the Sicilian silver mines and beg to offer some observations on this subject—a painful one, as you may well believe, to me and to all those of my countrymen who have had their attention directed to it. What Professor Mosso and Signor Sonnino have said with regard to affairs in Sicily is the bare truth, and more, it is not the whole truth. I am certain that the solution of this problem must not be looked for exclusively in Sicily, but rather in the general sanitary administration of all Italy. To say *migliorate le abitazioni* (improve the dwellings) serves no purpose, for everyone knows that to improve the dwellings a great quantity of money would be necessary and difficult to obtain. The Government could not provide it, and, even if it could, it would be unjust to the general State that the money should be spent in Sicily alone, for all parts of Italy have need of the same assistance. Looking outside the Government, we must confess that private individuals are everywhere so ignorant of the subject of the sanitation of building that they cannot understand the necessity for improving the dwellings where their ancestors lived. Notwithstanding this reluctance it is certain that the only way to effect reform is to manage that every householder shall be induced to improve his own property, but when the cry of "improve the dwellings" is loudly made it must be remembered that it will only be effectual if the necessity for the improvement is intelligible. In fact, it is the first duty of the reformers to make everyone able to understand this necessity.

There is no country in the world in such a favourable condition as Italy for inducing the whole of the population to promote general sanitation. The whole of our kingdom is divided into 8256 communes, and these are obliged by law to have a certain number of medical men in proportion to their population; but the proportion is not constant, varying from one medical man in every 2000 to one medical man in every 5000. These medical men (*medici condotti*), again, are sometimes paid to look after the general health of the community and sometimes have only charge of the poor. As a teacher of Materia Medica I have faith in the power of medicine; but I know, as every practising medical man does, how powerless our profession is when it finds its patients in such wretched habitations as those Signor Sonnino has described. This fact sometimes escapes attention. Medicine has so many attractive sides that many of its votaries become quite blind to the facts of general sanitation and, while examining the patient with every attention, deliberating over the extent of the mischief, and ordering the drug they think fittest, do not take into account for a moment the sanitary conditions under which the patient is living and to which, perhaps, the disease may be attributable. Our *medici condotti* should be paid as preventive officers and public teachers of sanitation rather than as therapeutists. If this were done such a powerful stimulus would be given to the cause of sanitation in Italy that in a brief space of time such horrors as those which have been described by Professor Mosso and Signor Sonnino would disappear entirely.

Our sanitary law, described and extolled by so many foreigners, does not work towards the promotion of good sanitation. We have a medical bureaucracy acting in a bureaucratic manner, capriciously, and without direction of law or by-law. In every *prefecture* there is a *medico provinciale* whose duty it is to superintend the sanitation of all the provinces, but who, as a matter of fact, has nothing to superintend, because no sanitary work is going on, and the only man able to give practical assistance and advice, the *medico condotti*, is not there for this purpose. As, moreover, these provincial medical

officers are guided by neither law nor practical knowledge it follows that they sometimes give extravagant orders. This is proved by the examples of Venice and Milan. In the former of these towns a circular was issued forbidding the segregation of patients affected by small-pox, and in the latter the official report advised parents that in the case of measles sound children should be brought into contact with diseased ones when the epidemic was mild, "in order that they should catch a mild form of the disease, which every one must have." I have great belief in the evolution of medicine and consider that the study of the cause of disease already forms, and will in time more surely form, one of the chief interests of medical men. With this evolution the horrors to which you allude in your journal—which, also, are not a speciality of Italy—will entirely disappear.

I am, Sirs, yours faithfully,

C. RUATA,

Direzione della Scuola di Farmacia, Universita di Perugia.

Perugia, March 16th, 1894.

"DECREASE OF PRISON POPULATION."

To the Editors of THE LANCET.

SIRS,—Perhaps you will allow me a few lines in answer to your last annotation on the prison population. I nowhere assert that the census return takes the dimensions of the prison population as a test of the movement of crime; I merely remark that the size of the prison population is not an accurate test. I do not attach much value to the police estimates as to the numbers of the criminal classes, inasmuch as these estimates are mere guesses; the best way of arriving at the proportions of the criminal classes is to look at the percentage of recidivism. Recidivists are the criminal classes, and if they are increasing in number, as we know they are, the proportions of the criminal classes are not declining. My reason for giving the total number of commitments to prison was based on the following grounds. The census of the prison population includes commitments of all kinds—persons on remand, persons for trial, persons under sentence for non-payment of fines. I gave the total commitments to match the census return, and I am surprised that this point should be used against me, inasmuch as it is equally valid against the Registrar-General. This gentleman, in attempting to account for the decrease of the prison population, does not eliminate any class of commitments before going forward with his explanations; and I followed him in this respect, in the first place, because I did not wish to find fault with trifling inaccuracies, and in the second place because the inclusion or omission of remand and discharge cases, according to my method of arriving at the decrease of the prison population, makes comparatively little difference to the final result. Finally, I prefer my figures to the Registrar-General's because these figures do not accurately give the number of commitments on conviction. For instance, all juveniles sent to reformatory schools were, until last autumn, sentenced to a preliminary period of imprisonment. These cases are not included in the Registrar-General's table of commitments. Nor does his table include, as I said before, the commitments where a fine is not paid. In 1891 these commitments after sentence in court of summary jurisdiction amounted in round numbers to 59,000, and surely a table which omits such a vast number of commitments is to be regarded as incorrect. In addition to this the Registrar-General accused me of making an incomprehensible blunder, not in the number of convictions, be it remembered, but in the total number of committals, and he produced what he called the total number of committals in opposition to my figures. I showed in my letter to you that the Registrar-General's total committals are wrong and that mine are right.

In the *Nineteenth Century* for 1892 I have dealt with the question of serious crime in the last decade. I have shown there that if the decade 1870–79 is compared with 1880–89 the most serious forms of crime have increased, not decreased. My method of arriving at the decrease of the prison population is objected to, but it is not said on what grounds. My method is that when a prison population decreases it decreases from two fundamental causes, acting singly or in combination. These causes are (1) a decrease of commitments; and (2) a decrease in the duration of sentences. I shall be very glad if anybody can point out any other causes except the outburst of a fatal epidemic or the pardoning *fiat* of the Government. The conclusion arrived at by the census return which I have been battling against all along is the following statement: "So far from the average term of imprisonment having declined in the interval between 1881 and 1891, the very opposite had occurred, and the average term had become, if anything, slightly longer." This conclusion, in my humble opinion, is erroneous. The other conclusion, although it is somewhat like a contradiction of the first, to the effect that the longer sentences have been shortened and the shorter have had other penalties substituted for them, I have never assailed. But the first conclusion, as I have shown in my letter to you, and also in *The Times*, is wrong, and it vitiates the report.

I am, Sirs, yours truly,

March 28th, 1894. WILLIAM DOUGLAS MORRISON.

*** So far as the published "judicial statistics" afford the means for calculating the average term of imprisonment in 1881 and 1891, it appears to be beyond question that this average term declined during that period, and this is stated in the census report to be due to the fact that the effect of the shortening of all but the very shortest sentences is more than counterbalanced by the substitution of other punishments for the preponderating number of short sentences of imprisonment. We cannot agree with Mr. Morrison that he has proved in any of his letters that the total average term of imprisonment has been decreased.—ED. L.

VACCINATION OF GIPSIES.

To the Editors of THE LANCET.

SIRS,—My object in addressing you just now is to bring to your notice, and that of the profession, how badly the wandering gipsy population of England is protected against the ravages of small-pox and the risk incurred from that unsatisfactory state of things, in the hope of being the means of some steps for the vaccination of the class of people referred to being adopted by Parliament. By the early post on Monday morning last I received notice from the inspector of police at Harwich, in obedience to a general order by the chief constable of the county of Essex, that a gipsy family had arrived at Parkeston, which is at the eastern end of one of the sanitary districts (Tendring rural) under my care. I visited the locality the same forenoon and found a van of the ordinary size, the inmates of which were a man and his wife and nine children, the ages of the latter ranging from twenty years to eighteen months. On my inquiring as to the vaccination of the family, the mother quickly told me that they had all been vaccinated except the youngest. Being desirous, however, to have ocular demonstration of this fact, I requested that I might be allowed to examine the arms of the children. This was strongly resented, and, on my insisting, the mother admitted that none of them had undergone the operation. Of course I intimated I would report the matter and would do my utmost to have vaccination carried out. This, I hear from the police, has so far had the satisfactory effect of their moving from the locality, and I shall endeavour to hunt all such vans out of my districts. I brought to the gipsy's notice that the van was overcrowded and was met by the statement that only four slept in the van and the others in a small cart and on the ground underneath the van, where the mother made a bed for them. I have since verified this by the police.

It is most difficult for sanitary authorities to deal with this class of people under the existing laws, as a movement is made out of the district before any legal process can be put in force; I have applied to the chief constable for any hint he can give me, but he is as much at a loss what to do as I am. The risk, however, must be admitted to be enormous to the public at large, and it would be a boon if some means could be devised to lessen or prevent it. With apologies for so far trespassing on your valuable space,

I remain, Sirs, yours faithfully,

J. W. COOK, M.D.,

Colchester, March 28th, 1894. Medical Officer of Health.

"EPILEPSY AND ERRORS OF REFRACTION."

To the Editors of THE LANCET.

SIRS,—The annotation in THE LANCET of March 24th last upon my paper in *Brain*—winter number, 1893—dealing with cases of epilepsy, their refraction and their treatment

by glasses, seems to me to be likely to give to the reader an imperfect idea as to my position on the subject. Your article appears to convey the impression that I have concluded that epilepsy can be cured by glasses *alone*. In no place have I stated this; on the contrary, I have been careful to put forward the fact that medical treatment was continued. It may, however, be pointed out that in the eight cases of cure and relief, of which brief histories were given, and also in others not given in detail, the patients had taken long courses of bromide of potassium without apparent effect, and that their improvement dated from the time they commenced to wear their spectacles. I have simply added the correction of errors of refraction to the course of treatment pursued by the physician, and have given the results of this in my paper. I am convinced that the removal of such a source of irritation as an error of refraction will, in many cases, when combined with medical treatment, lessen both the number and the severity of the attacks. As yet there are no sufficient data as to the results of treatment by glasses *without drugs*, and therefore no opinion on this point can be offered. I am, Sirs, yours truly,

Harley-street, March 31st, 1894. H. WORK DODD.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Recent Assizes.—Reprieve of Condemned Men.

THE three men convicted of the murder of a policeman at St. Helens have been reprieved, as has also the man convicted of the murder of his paramour at Manchester. The woman who was convicted of the murder of her husband under circumstances showing great deliberation and of the most revolting character paid the last penalty of the law on the 2nd inst. at Her Majesty's prison, Walton. The medical evidence in the St. Helens case has been subjected to much hostile criticism in the local papers, a proceeding to be deprecated since medical witnesses for the Crown are debarred from making any reply. It is satisfactory to record that the body of the ill-fated police-constable was subjected to the most careful examination, first by Mr. McNicoll and Mr. Knowles of St. Helens and subsequently by Mr. F. T. Paul of Liverpool and Dr. Robertson of St. Helens, but no lesion which could account for death was found. While it would have been more satisfactory had the cause of death been manifest to the eye, it was impossible to separate it from the violence received but a few hours before death actually occurred. A perusal of the condensed history of the case as given in THE LANCET of March 24th will show that the term "deferred shock" was a very fair and probable explanation of the cause of death. Nor must it be forgotten that by the old and present law persons are answerable for death following within a year and a day after an act of violence. It is to be hoped that the sentence on these men will be sufficient to deter others from cowardly attacks on the police, and it would be well if some of the misplaced sympathy showered upon prisoners in sensational cases were extended to the bereaved relatives and friends of the deceased. As has been already stated, the learned judge who tried the case lamented that the officers did not use their staves or batons sooner. In this he followed what the late Lord Bramwell, when Baron Bramwell, said thirty years ago, "I don't see why a policeman should wait until he is half killed before he defends himself."

The Watch Committee and Immoral Houses.

The report of the chief constable, which has just been issued, has some apposite remarks on this subject. Some years ago the Watch Committee of the Liverpool City Council decided to put in force the provisions of the Criminal Law Amendment Act with reference to the suppression of immoral houses. In his report for last year the head constable gives the following particulars. During the year 124 brothel keepers were arrested, 767 were summoned to appear and did so, while 58 were summoned but absconded, making a total of 949. Of these, 831 were convicted and 58 were discharged. It is somewhat significant that of the 891 persons who answered to the summons 124 were men and 767 were women. The terrible persistence of this evil, as observed in THE LANCET some years ago, is shown by the fact that, in spite of repeated fines and imprisonments, the numbers were 222 in excess of the previous year. The head constable expresses his regret that though 831 houses were convicted as brothels, not one single owner or agent could be made amenable for allowing them to be so used owing to the difficulty of proving a guilty knowledge on the part of such agents or owners; and yet the Home Secretary and the chief metropolitan magistrate have decided that the existing law is sufficient if properly and rigorously administered.

A Year's Returns of Drunkenness.

Among other items of painful interest in the head constable's annual report are the tables relating to drunkenness. From Table 16 it appears that during the year there was a total of 5409 apprehensions for being drunk for the first time, the respective numbers of the two sexes being: males 3487; females, 1922. Those apprehended for a second offence were much fewer, being: males, 185; females, 257—total, 442. It has been repeatedly urged by those who ought to know the truth that the "five shillings and costs or three days" does deter many men and women from repeating the offence, and that a very large number are convicted once only. These figures would appear to confirm this view. Another curious feature in this table is that there were no convictions of males for being drunk more than seven times; for the eighth time and down to the twenty-fourth time women monopolise the table and the figures. As many as twenty-four females were convicted of being drunk twenty-four times. The next table shows that more than one-third of the apprehensions for drunkenness occurred on Saturday, Monday being the next heaviest day.

Accidents and Life-saving.

A more gratifying table is that showing the great and valuable services rendered by the police and others in saving lives. Of a total of 353 persons who fell into docks, canal, &c., 39 were rescued from drowning by the police and 275 by others. There were also 71 persons rescued from burning. The year's accidents exceeded 2500, and in a large proportion of these valuable aid was rendered by the police.

April 3rd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Lecture on Sewerage at Chester-le-Street.

DR. TAYLOR, of Chester-le-Street, gave an instructive and interesting lecture on Sewerage in that town last week, in the course of which he stated that the difficulty of getting rid of sewage was such that in spite of all the plans to utilise its products there were only three or four towns in the kingdom where the expense of utilisation was recouped in any way. The plan adopted at Chester-le-Street cost £400 per annum, or 10*d.* per head of the inhabitants.

British Dental Association.

The annual general meeting of the British Dental Association was held last week in the College of Medicine, Newcastle. The members assembled in the city on Wednesday and had a conversazione in the Natural History Museum, which was given by the local reception committee in order to afford opportunity for welcoming the visiting members to Newcastle. Mr. C. S. Tomes, F.R.S., was elected president and gave a reception, at which he delivered his presidential address. On Friday night the annual dinner was held in the Grand Assembly Rooms. Professor Philipson welcomed the association to Newcastle and hoped that ere long the University of Durham College of Medicine would be able to offer a complete dental curriculum. Excursions to South Shields and Tynemouth, Durham, Burradon Colliery, and Jesmond Dene were arranged for Saturday afternoon. Members of other branches of the profession were courteously invited to the meetings and receptions.

Cumberland and Westmorland Convalescent Institution.

The annual meeting of governors and friends of this institution has been held at the town-hall, Silloth, under the presidency of the mayor. The thirty-first annual report of the committee congratulated the subscribers to the institution upon its continued progress and prosperity. The number of patients admitted during 1893 was 699, being the largest in any one year. The subscriptions, donations,

and patients' payments showed an increase on the previous year, but the amount of Hospital Sunday and Saturday collections and church collections, remitted direct, was not so large. The medical report by Dr. Leitch, the visiting medical officer, presented the following items:—Number admitted: males, 331; females, 368. Of these there came from Carlisle 264; Carlisle Infirmary, 59; Cumberland, 220; Westmorland, 53; Northumberland, 48; Lancashire, 9; Warwickshire, 2; Durham, 11; Yorkshire, 3; and Scotland, 30. There were 566 medical cases, 69 surgical ones, and 64 not medically certified. Result: gained weight, 567; lost weight, 59; no change in weight, 63; left before expiration of time, 10.

Ambulance Classes at the Carlisle Microscopical Society.

On the 28th ult. an interesting meeting was held in the Viaduct Hotel Hall, West Walls, under the auspices of the Carlisle Microscopical Society, when Dr. Maclaren delivered an address on "Broken and Dislocated Bones" to an audience consisting of a majority of the medical men of the city, of members of the ambulance class in connexion with the North-Eastern Railway, of members of the ambulance class of the city police force, and of nurses from the workhouse hospital. Members of the Microscopical Society and their friends were also present. The chair was occupied by Mr. C. S. Hall, M.R.C.S. Eng., president of the society.

Lord Armstrong and Bamborough Castle.

A correspondent of one of our local papers hears that Lord Armstrong, who has purchased Bamborough Castle from Lord Crewe's trustees, intends to endow it with £20,000 and utilise the ancient and historic fortress as a convalescent home.

The Pistol Accident at Wallsend.

The sad pistol accident at Wallsend last week, whereby the vicar's daughter lost her life, is a general topic of conversation in all circles here. The facts are shortly as follows. A youth brought a pistol to a choir practice, and it was passed, unloaded at this time, to another youth. Its action was shown to the young lady, who expressed curiosity to see it. Meantime it was passed to a third youth, and a cartridge was inserted. Afterwards the first lad obtained the pistol and fired it, not being aware that it had been loaded, with fatal effects against the young lady's head. Surely some effectual check should be placed upon the possession of firearms by young persons. Last week I heard of a case in Newcastle of a young man who dangerously wounded himself in the femoral region by drawing a loaded revolver from his trousers pocket.

Newcastle-on-Tyne, April 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Maternity Hospital.

THE annual meeting of the Royal Maternity Hospital was held last week, Lord Provost Russell, M.B., presiding. The report stated that during the year 285 patients had been admitted to the hospital and 531 attended at their own homes. The number of nurses trained was forty-eight. A hope was expressed that friends of the hospital by legacy or otherwise would endow the institution with a capital fund that would give greater financial stability than was possible with the precarious sustenance obtained from subscriptions alone. The ordinary income had been £799 and the expenditure £701. After the meeting the Marchioness of Tweeddale laid the foundation-stone of a married women's pavilion, which is being added to the hospital and for which a sum of £4000 has been raised.

Edinburgh University Examinations.

The first and second professional examinations are being held at present, and a large number of candidates have presented themselves.

Death of Dr. Samuel Moore of Glasgow.

Dr. Samuel Johnston Moore, M.D., F.F.P.S. Glasg, who died at Glasgow on the night of Monday, April 2nd, at the age of sixty, after an illness of a year's duration, had been for thirty years in practice in that town, and was a prominent figure in medico-legal and social circles.

April 3rd

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Medical Students' Agitation.

THE following petition, with over 300 signatures, has been presented to the President of the Royal College of Physicians: "To the President and Fellows of the Royal College of Physicians in Ireland. We, the undersigned, being candidates for the diploma of Licentiate of the Colleges of Physicians and Surgeons in Ireland, respectfully ask you to consider the following requests: 1. The reduction of the fees for examination. The English Examining Boards' fees are £36, the Scotch £26, while we pay £42. 2. The reduction of the fee for re-examination from three guineas to one guinea. May we respectfully remind you that a re-examination fee was established to cover the cost to the Colleges of that examination, and not as a source of revenue." A similar petition has been placed in the hands of the President and Council of the Royal College of Surgeons.—A meeting of the students' petition committee was held on the 28th ult. in the school of the Royal College of Surgeons. As no communication had then been received from the Council since the meeting between that body and a deputation of the students, it was resolved to call another mass meeting of the students for Wednesday next.

Health of Dublin during February.

As compared with the previous month, there were substantial reductions in the mortality ascribed to influenza and measles. The other zymotic diseases caused about the same number of deaths in each month. The death-rate was 1·33 above the mean rate for the corresponding period in the previous ten years. The zymotic death-rate was 0 29 per 1000 above the average for February. There were 10 deaths from typhoid fever, and 25 from influenza during the month.

Fever Epidemic at Castleisland.

The epidemic of fever at Castleisland, near Tralee, continues to spread. At the Petty Sessions last week five summonses were heard at the suit of the Tralee vice-guardians against the proprietors of a creamery for having received milk from houses where the epidemic existed. Evidence was given to show that the defendants took milk from the infected houses after receiving notice from the vice-guardians not to do so. Defendants were fined £5.

The Mercy Hospital, Cork.

The mortality of this hospital for the past year has been singularly low, due partly to the recent improvements in ventilation and sanitation. During the year 17,586 patients were treated in the extern department. A house adjoining the hospital has been obtained, which will, it is proposed, be converted into a suitable extern department, with waiting-rooms, consulting-rooms, &c., and the upper part will supply what has long been required—additional private and general female wards. The committee hope to pay off the debt by the provision of additional accommodation for private patients. It was suggested last year that the large commercial houses, the trade societies, and the labour unions should endow beds, or at least give a substantial annual donation, and that the subscription list should be increased by the addition of the names of clerks and workmen who could easily manage to contribute five shillings, or even half-a-crown, every year.

Belfast Ophthalmic Institution.

The annual meeting was held on March 29th, and from the report presented it appears that 1756 eye, ear, and throat cases have been treated during the past year. There were 94 intern patients. The balance against the institution has been reduced to £20. In presenting the medical report Dr. Walton Browne said that it was now almost fifty years since his father began the work of the hospital, which was at present in a most efficient condition. There is a clinical class attended by students, and Dr. Calwell, the assistant surgeon, had, Dr. Browne said, given a great deal of time and trouble to the work of the hospital.

April 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Death of Professor Brown-Séquard.

PARIS—I mean *le tout Paris*, and not only the scientific section of its population—was startled last night by the

announcement of the sudden death, at his house in the Rue François I., from cerebral congestion, of the famous Dr. C. E. Brown-Séquard, the successor of the still more famous Claude Bernard in the chair of Experimental Medicine at the Collège de France. The communication of the unexpected news yesterday by M. Loewy, the President of the Académie des Sciences, to the members of that learned body, to which the deceased belonged, created the most painful impression, and the meeting was immediately adjourned as a token of respect to his memory. Dr. Brown-Séquard was born in the year 1817, at Port Louis, Mauritius, his father being a Mr. Brown of Philadelphia, U.S.A., and his mother a French lady, Mdlle. Séquard. He came to Paris in 1838 in order to complete his medical studies and was admitted an M.D. of the Paris Faculty in 1840. He then returned to Mauritius, where he established himself as a practitioner of medicine. But the routine of medical practice was ill-suited to his taste for experimental physiology, and the unusual sight of a cock stalking in his barnyard with a rat's tail grafted on his head as a crest, &c., was hardly calculated to inspire confidence in him as a typical *bourgeois* practitioner. Shaking the dust of this uncongenial soil off his feet, he left for the United States. He soon, however, returned to Paris, where he continued his researches on the nervous system. Such was his reputation even at this early period of his life that the Faculty of Medicine entrusted him with a special course of lectures. In 1864 he returned to the United States to occupy the Chair of Physiology and Diseases of the Nervous System in the Harvard University. In 1878 we find him again in Paris, where, in spite of difficulties connected with his British nationality, he was appointed to succeed the illustrious Claude Bernard as Professor of Experimental Medicine at the Collège de France. This position he has occupied ever since, and it may truly be said that he has worthily sustained the renown of the chair filled before him by a giant in the physiological world. In 1886 he was elected a member in the section of Medicine and Surgery of the Académie des Sciences, *vice* Vulpian, appointed permanent secretary. In 1889 the decoration of the Legion of Honour was accorded him. He carried off numerous prizes awarded by learned societies. Amongst them were the Prix Lacaze (Académie des Sciences) in 1882 and in 1885 the Prix Biennial of the Institute, worth 20,000 fr. In 1887 he replaced Paul Bert as president of the Société de Biologie. I must ask to be excused the herculean task of analysing his life work, comprised as it is in more than 500 publications. But his discoveries in the field of neurology will never be forgotten. Do we not owe to him the discovery of vaso-motor nerves? Who can forget his discoveries in connexion with inhibition, the conducting properties of the spinal cord, the poisonous properties of confined air, &c? When, in 1852, Claude Bernard published in the *Comptes Rendus* the results of his experiments in the section of the cervical sympathetic nerve of the rabbit, Dr. Brown-Séquard followed this up the same year[1] by showing that the effects of the section of the sympathetic nerve were the results of the paralysis of the bloodvessels. It may truly be said that he had the "fever of work." Any idea that passed through his active brain was immediately consigned to any scrap of paper—newspaper wrappers, old envelopes, visiting cards—that were at hand. These scraps he would pack in a box, there to lie forgotten. His method of research differed entirely from that of his predecessor, Claude Bernard. The latter would obstinately follow the trail of an idea that had germinated in his mind, and, without swerving from the path, trace it to its logical conclusion; Dr. Brown-Séquard, on the other hand, worked by intuition, his deductions being singularly rapid and apparently savouring of revelation. Once he espoused any cause, scientific or other, he would defend it most obstinately. Thus, on the occasion of the *coup d'état*, his too-openly expressed Republican sentiments drove him to London, where the Hospital for Paralysis was founded expressly for him. In the pursuit of physiological knowledge he never spared his own person and would, without hesitation, expose himself to discomfort and even risks; thus in his experiments on the transfusion of blood into the decapitated head of the criminal the warm blood injected came from his own veins. In his researches on Digestion he swallowed sponge tampons attached to a cord, which tampons he removed saturated with gastric juice. In Mauritius, whither he returned in order to study an epidemic of cholera raging there, he on several occasions deliberately swallowed cholera dejecta. When, in 1889, he invented the method of treatment by organic extracts it was on his own person that the first trials took place. And this leads me to speak of the real value of this much-vaunted and much-abused method. I think that the hopes indulged in by the deceased *savant*—that in the injection subcutaneously of orchitic juice there has been found, not only a panacea for senility, but a remedy for locomotor ataxy, neurasthenia, and other disorders of the nervous system—have proved to be illusory. Suggestion plays a leading part in the cases reported. It is, however, only right that I should mention a case of ataxy under the care of Dr. Legroux, where both patient and physician were convinced that a long-continued course of this treatment had worked surprising results. I have seen the patient myself, and he walks well, whereas locomotion used to be almost impossible. But the principal debt of gratitude humanity owes to Dr. Brown-Séquard is that he has thus drawn attention to the juice *internally* secreted and re-absorbed into the circulation by ductless and other glands. Thyroid injections and feeding are a direct outcome of what was regarded as his particular fad, and everyone is acquainted with the marvellous results yielded by this mode of treatment in myxœdema. It is no exaggeration to say that, as far as can be judged, Dr. Brown-Séquard has invented a new system of medicine which has a great future before it. For the past year he had suffered from phlebitis of the right leg, but he was well enough to recently visit the Riviera, and his sudden demise has come as a surprise to his friends. His disappearance from the scientific arena is an irreparable loss, and his death leaves the world distinctly poorer. The deceased was married three times: firstly, to Hélène Hetcher; secondly, to Maria Carlisle; and, lastly, to Emma Dahire, who died two or three years ago at Nice. He never recovered from the chagrin caused by the death of his wife, to whom he was devoted. The funeral is fixed for to-morrow (Wednesday), and the interment is to take place at the Montparnasse cemetery. I may mention, in conclusion, that Professor Brown-Séquard was the last surviving French honorary president of the Continental Anglo-American Medical Society, which will be represented at the funeral by Dr. Barnard, its honorary secretary.

[1] Philadelphian Medical Examiner.

The late Professor Pouchet.

The length of the above notice compels me to defer a like notice of the lately deceased M. Pouchet. I hope to supply one next week.

April 3rd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT)

The Condition of the Sydney Benevolent Asylum.

A BOARD of inquiry into the methods adopted for carrying out the objects of the Sydney Benevolent Society was recently appointed, consisting of Professor Anderson Stuart, Drs. Mackellar and Maclaurin, and Mr. Foreman. It has reported that the present Benevolent Asylum buildings are so old and dilapidated that it would be impossible to repair them except at great expenditure. While the premises at Moore Park, now used as a lying-in hospital, are approved of, it is recognised that the arrangement can be only temporary. The board recommends that the buildings occupied by the School of Industry at Darlinghurst should be enlarged and adapted to meet the requirements of a maternity hospital, for which their site is admirably adapted, being convenient of access, isolated, and elevated. It is suggested that the School of Industry could be moved to some vacant buildings at the Randwick Asylum. The Premier is trying to make the necessary arrangements for carrying out the suggestions of the board. Meanwhile puerperal fever has broken out at the temporary Maternity Home at Moore Park, two patients having died, and all the patients capable of removal have been taken back to the old Benevolent Asylum buildings, but to a different ward from that previously used for the purpose, when puerperal fever broke out at the asylum.

A Medical Libel Action.

Reference has previously been made to what the newspapers call "the medical imbroglio" at Castlemaine, Victoria. The medical practitioners in this town do not appear to have been a happy family for some time, the first public intimation of the fact having been made in the middle of 1892, when the Charities Commission took evidence

concerning the administration of the Castlemaine Hospital. The honorary staff apparently object to the present arrangement of having a highly paid and experienced resident medical officer, who is allowed a limited consulting practice, and would prefer a junior man as house surgeon, who would simply carry out their directions. Actions for libel have been brought, and the whole proceedings were not calculated to uphold the dignity of the profession, and the judge was very severe upon both parties to the suit for bringing what he called such a schoolboy's quarrel into court at all.

Indigenous Medicinal Plants of Queensland.

At a recent meeting of the Medical Society of Queensland, Dr. Bencroft exhibited a number of specimens of native medicinal plants and preparations extracted from them. The eucalypti yield various kinds of gum, containing astringent principles allied to tannic acid. By dissolving the recently exuded gum in water and evaporating the concentrated solution this gum is obtained in red scales and is very useful in diarrhœa. From the bark of the cinnamomum obtusifolium can be obtained a tincture with aromatic and astringent qualities, combining the properties of cinnamon and catechu and having no toxic properties. It is especially useful in chronic diarrhœa. The tincture prepared from the alstonia is a capital all-round bitter, free from tannic acid and non-toxic; though tasting exactly like quinine, it is not antiperiodic. The alkaloid of the duboisia is too well known to require more than mention, but the pituri obtained from an allied plant has very different physiological properties. The active principle appears to be nicotine, or a closely allied body. The natives in the interior chew it in company, each sucking for a short time a small quid, passed from one to the other. The leaf is probably forty times stronger than that of tobacco.

Acute Mononephritis.

At the last meeting of the South Australian branch of the British Medical Association Dr. A. A. Lendon read a very suggestive paper with the above title. He first narrated a case of ordinary typical nephritis with dropsy, in which he found post mortem that one kidney was very much more diseased than the other, and this fact suggested that it had been affected long before the other. Then the notes of a case were read with all the classical symptoms of nephritis: scanty urine containing blood and blood-casts in the first stage, then albumen with granular and fatty casts, and finally cardiac hypertrophy and uræmic symptoms, but no anasarca throughout. Dr. Lendon explains this case as one of nephritis affecting one kidney only, which he thinks would account for the absence of dropsy.

Renal Surgery.

At the Victorian branch of the British Medical Association Mr. H. M. O'Hara recently reported four cases and Mr. G. A. Syme two cases of successful nephrolithotomy. The latter surgeon also read notes of a case of Exploratory Nephrotomy for supposed Renal Calculus, which ended fatally from secondary hemorrhage. Mr. Jordan Lloyd's method of exploring the kidney with a tenotome and child's bladder sound had been adopted, and the hæmorrhage which occurred at the time was apparently arrested by plugging. It recurred next day when the dressings were changed, and the patient collapsed in spite of the transfusion of saline solution and the almost immediate arrest of the hæmorrhage. At the necropsy the tenotome was found to have divided a vessel of considerable size.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

Blackmailing a Medical Man.

DR. MOORE of Napier has had the very unpleasant task of bringing to justice the husband of one of his patients. The culprit accused the doctor of criminally assaulting his wife while she was under the influence of chloroform, which was administered for some minor operation without any other person being present. The blackmailer demanded £250 or "he would expose the way in which his wife had been treated." After a long trial the prisoner was convicted and sentenced to five years' penal servitude. Dr. Moore has had a lesson not to give an anæsthetic without a third person being present, a maxim which cannot be adhered to, for many reasons, too closely.

Medical Education in New Zealand.

In reply to the circular issued by the Wellington branch of the New Zealand Medical Association, and to which I referred by the last mail, Dr. Closs, acting as hon. secretary to the Otago branch, has circulated a manifesto among medical men practising in the colony, of which the following is a brief summary:—In the first place, objection is taken to the tone of the circular, to its incorrect statements, and to the circulation of the manifesto outside the branches of the Association, since it was most fitting that it should have emanated from the New Zealand Medical Association alone. The Otago School, it is affirmed, has already turned out graduates who have acquitted themselves as well as those trained in older schools, and is of great importance not only to Dunedin as a teaching centre, but to the colony at large. Referring to the amount of hospital practice to be taken advantage of in the school, it is considered that there is ample material therein for clinical teaching, and a protest is made against the affirmation that "less than 25 per cent. of the cases have been of any value for teaching purposes." Mention is also made of the aid derived from associated institutions, the cases in which are available as supplementary means of clinical instruction. Exception is likewise taken to the statement that in Dunedin Hospital insufficient means are provided for the study of minor surgery as well as of pathological anatomy. Finally, with regard to the care exercised in securing thoroughness in the professional examinations it is stated that an examiner is appointed by the New Zealand University with equal powers to act with the teacher of the subject in which the student is to be examined, and that the same rule applies in the case of the final examination. While admitting the vast importance of this subject it seems to me that announcements of opinions circulated throughout the colony by local branches of the New Zealand Medical Association can do little good. The whole subject should be discussed in all its details at a properly convened meeting of medical men practising in this colony. Anything short of this can only open the door to newspaper criticism which cannot tend to improve the status of our profession in this young colony.

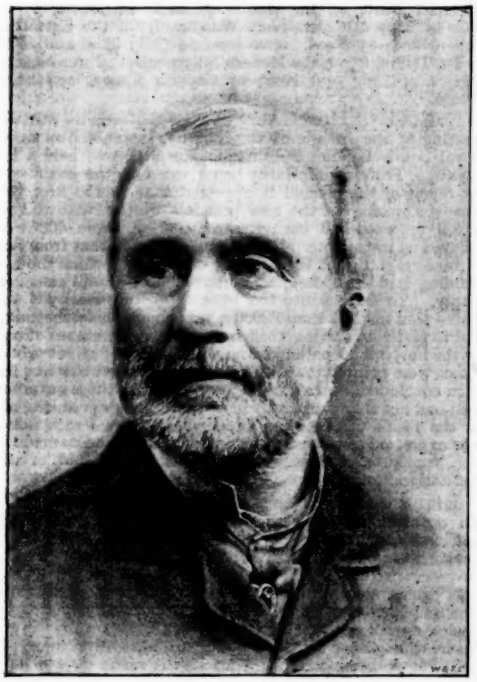
Feb. 21st.

Obituary.

HENRY SMITH, F.R.C.S. ENG.

BY the death of Mr. Henry Smith on Easter Sunday, at his residence, Summerhill, Horsell, after a few weeks' illness, the medical profession has lost another of the brilliant operating surgeons who were trained at King's College Hospital by the late Sir Wm. Fergusson. Henry Smith was born at Parkhill, Croydon, in 1823. His father was a London solicitor and a native of Herefordshire. He was educated at Croydon and afterwards at Harrow, where amongst his school-fellows were Sir Robert Peel, Sir Thomas Moncrieffe, Shelley (the son of the poet), and other celebrities. In those days his chief recreations were fishing and birds-nesting, and he has recorded in a short auto-biographical sketch many amusing anecdotes associated with these sports in his early youth. He maintained through life his love for all objects of natural history, such as birds, ferns, and flowers, and was ever an ardent and enthusiastic fly-fisher, spending the greater part of the short holidays from professional work which he allowed himself in the spring and summer in this amusement, in which he attained great proficiency. So infatuated was he with this sport that in after years his lectures and clinical demonstrations were constantly interspersed with illustrations connected with the rod and line. His classical education at Harrow also came into evidence by his frequent apt quotations in Greek and Latin. Henry Smith had no predilection for the medical profession, but in 1840 he was apprenticed by his father to a general practitioner in the West-end, and went through the drudgery connected with an open surgery, even to delivering the medicine at the houses of the patients. It is amusing to relate that, although his master forbade him to smoke, he contrived to do so in the bottle shed, successfully evading detection by subsequently washing his mouth with peppermint water. Many other anecdotes of his apprenticeship are very interesting. During this time he was brought into contact with many of the then leaders of the profession—Lawrence, Marshall Hall,

Addison, Antony White, and others—and he gives a most picturesque account of many of them. In 1843 he entered King's College as a matriculated student, and after a two and a half years' course obtained the Membership of the Royal College of Surgeons, and was elected house surgeon to Fergusson and Partridge in the summer of 1846. He afterwards held a resident appointment at the Bloomsbury Dispensary, and at this period of his career had no idea of the future that was awaiting him. He intended to become a general practitioner and took rooms in Bloomsbury, where he tells us he lived precariously and was for some time in very straitened circumstances. A great change, however, soon occurred. In 1847 Fergusson made him his private assistant and in the autumn of 1848 and afterwards left him in charge of his private practice during his annual two months' holiday in Scotland. He thus gained a knowledge of many people of influence and position, and this was the starting point of his successful career as a surgeon. In 1849 he became a Fellow of the Royal College of Surgeons by examination. In 1851 he was appointed surgeon to the Westminster General Dispensary, and in 1861 assistant surgeon to King's College Hospital, being appointed at the



From a photograph by Messrs. Barraud (Limited), Oxford-street, W.

same time as his friend, the late Mr. Peter Price. He became a member of the Medical Society of London forty-five years ago, and delivered the annual oration forty years back. He turned his attention more especially to the pathology and treatment of stricture of the urethra and diseases of the rectum. He chose the latter subject for his Lettsomian Lectures in 1865, and afterwards published them in a monograph, which ran through many editions. He moved from Caroline-street, Bedford-square, to Wimpole-street in 1866, and was in the following year elected President of the Medical Society at a most critical epoch in its existence, and when a large number of its members had seceded from it, and to Henry Smith its improvement at that time must be mainly attributed. He had a large class of pupils in the out-patient department at King's College Hospital, and his private practice rapidly increased. In spite, however, of his arduous public and private engagements he still managed to take short fishing excursions, and his peculiar fishing costume was one of the most familiar objects on the Wandle, the Avon, and the Lynns. He was also a regular visitor at the Botanic Gardens in Regent's Park, going there every morning before breakfast, and interesting himself in observing nature in every detail. He afterwards became a member of the council. The following characteristic letter of invitation to a colleague well illustrates this phase of Henry Smith's character:—

"MY DEAR ——,—Although the lesser celandine is shorn of its glories, the anemone nemorosa is carpeting our woods. The hyacinthus non-scriptus is just making its appearance; the stellaria holostea is proudly decorating the banks of our lanes; the chiff-chaff is come; the redstart was flying across my lawns this morning; the blackcap was singing gloriously as I emerged from my shower bath and as I walked through the copse; the picus major was hammering away with his blacksmith's anvil; moreover, Bob Turner is about to kill a pig, and Charley Mills is now hard at work at poleing the humulus lupulus. Such are the attractions I can offer you if you will pay me a visit at Swanley."

On the death of Sir William Fergusson in 1877 and the promotion of Mr. John Wood to the joint chair of Clinical Surgery with Sir Joseph Lister, Mr. Smith was elected Professor of Systematic Surgery at King's College. This position he occupied for ten years. His lectures were principally *viva voce*, full of anecdote, and contained much valuable and practical matter, and he possessed the happy knack of always holding the attention of his class. Under his brusque manner was hidden the most kindly disposition, which made him a favourite alike with patients and pupils. In 1888 he retired from the hospital and college in his sixty-fifth year and was made emeritus professor in King's College and consulting surgeon to King's College Hospital. On this occasion he was presented by his present and former pupils with a handsome service of silver plate. Since then he continued in consulting practice, although the greater part of his time was spent at his country residences at Swanley, Weybridge and Horsell.

Although Henry Smith devoted the greater part of his life to the treatment of diseases of the rectum, bladder, and urethra, he was also a good general surgeon and a rapid and brilliant operator in the style of his master, Sir William Fergusson, having begun his surgical work in the days before chloroform or other anæsthetics had become generally adopted, and when rapidity was a great desideratum. He seconded Fergusson's efforts in the substitution of conservative operations, such as excisions of bones and joints, for the too-frequent adoption of amputation then in vogue; but he will be best and longest remembered by the profession as the surgeon who introduced the treatment of hæmorrhoids by the clamp and cautery more than thirty years ago, and in spite of the opposition which this treatment has occasionally received it (with some slight modifications such as the increase in the power of the clamp) is still considered by many excellent surgeons the safest and best method of operating in suitable cases. His results both in private and hospital practice were most satisfactory. He was married three times and leaves three sons (two of whom are in the medical profession) and several daughters. His illness was of short duration. Thrombosis of the deep veins of the leg after an attack of influenza resulted in an embolic infarction in the lung, and from this a fatal pneumonia developed. On Friday last, the 30th ult., his remains were interred in the pretty churchyard surrounding Horsell Church, the service being attended by many of his former colleagues, old pupils, and personal friends.

DICKINSON WEBSTER CROMPTON, F.R.C.S. ENG.

IN the board-room of the General Hospital, Birmingham, there is a portrait of Mr. Crompton, on which an inscription states that it was presented by some friends after his twenty-five years' service as surgeon to the hospital; the date is March, 1872. During the time that has elapsed since that interesting occasion Mr. Crompton enjoyed a happy and well-earned repose until a few days ago, when he sank peacefully into his eternal rest. Full of all that should accompany age—"honour, love, obedience, troops of friends"—he lived to realise the associations which many would willingly covet and strive for, and has left a memory without a blight, of an honourable and high-minded character. Born on Sept. 30th, 1805, he was sent at an early age as a pupil to Dr. Male, the senior physician to the General Hospital; he was afterwards apprenticed for five years to Mr. Joseph Wood, the senior surgeon to the hospital, subsequently entering at Guy's Hospital and afterwards studying at Paris under Dupuytren. He became a

Member of the Royal College of Surgeons of England and passed the Apothecaries' Hall in 1829. In 1834 he obtained the Jacksonian prize for an essay on "Diseases of the Nose and Face," and in 1843 was elected an Honorary Fellow of the College. He became surgeon to the dispensary and to the Eye Hospital, and in 1843 surgeon to the General Hospital. Here his enthusiasm, his exceptional energy, and enduring physical powers were displayed in the constant exercise of hospital and private practice for many years. His all-round wisdom, his careful manipulations, and straightforward bearing soon placed him in the leading consulting position in the district, a position justified by his high sense of honour and professional knowledge, which endeared him to all with whom he came into contact. Apart from the reputation obtained from his success as a surgeon, his private character commanded admiration and regard. His bright and genial manner, and the happy and expressive stories with which he illustrated his points, carried him lightly through difficulties, and made hope more prominent in all his dealings with disease.

Mr. Crompton never took any part in public work outside his profession. He married Miss Woolley, the daughter of the Rector of Middleton, near Tamworth, whose death he survived for thirty years. He leaves one son only among the many friends who mourn their loss and regret the breaking of the last link in connexion with a long past.

JOHN SCOTT, B.A., M.B. R.U.I.

It is our sad duty to chronicle the death from pleuro-pneumonia, after a very short illness, at his residence in Belfast, on Sunday, March 25th, of Dr. John Scott, at the early age of twenty-seven years. The deceased, after an excellent record at Queen's College, where he was a scholar and a prize-winner in many classes, graduated in the Royal University of Ireland in 1892. He began practice in one of the suburbs of Belfast and was recently elected surgeon to the Ulster Hospital for Women and Children and Honorary Demonstrator of Anatomy in Queen's College. Dr. Scott was the author of a "Manual of Urine Testing," which had passed into a second edition. The greatest regret is felt at his death, in the outset of what promised to be a most successful career, and there is marked sympathy for his young wife and child. His funeral, which took place on March 28th, was largely attended.

BERNHARD SEGNETZ, M.D. MARBURG.

DR. BERNHARD SEGNETZ, who died on Friday, Feb. 23rd, in the United States, was a native of Hanau, Kurhessen, Germany, where he was born in 1811. He graduated with honours at his university and began his practice in Frankfort-on-the-Maine, where he was family physician to the Prince of Isenberg-Bierstein. The *Jewish World* says that a very high position was tendered to him on the condition that he would change his religion, but he refused to do so and went to America in 1851, and immediately acquired a large practice and the highest standing in his profession. Although a very busy man he was able to keep more than level with the times, and discussed in the columns of the medical press of this country and of Germany the latest and most advanced discoveries in medical science. He was a contributor to our own columns and was the author of many popular works in German. Dr. Segnetz was at different times the recipient of marks of personal esteem both from the German Emperor and Prince Bismarck.

Medical News.

UNIVERSITY OF ST. ANDREWS.—The following gentlemen, having passed the required examinations, had the degree of Doctor of Medicine conferred upon them on March 30th, 1894:—

Dingle, William Alfred, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., London.
Gardiner, Bruce Hubert John, M.R.C.S. Edin., L.R.C.P. Edin., L.S.A. Lond., London.
Gathergood, Benjamin William, M.R.C.S. Eng., L.S.A. Lond., Terrington St. John.
Hopper, Arthur Richard, M.R.C.S. Eng., L.R.C.P. Lond., Liverpool.
Monaghan, Thomas Joseph, L.R.C.P. Edin., L.R.C.S. Edin., Accrington.
Reckitt, Edward Bass, L.R.C.P. Edin., L.R.C.S. Edin., Boston.
Robinson, Tom, M.D. Brux., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., London.
Simon, Maximilian Frank, M.R.C.S. Eng., L.R.C.P. Lond., Singapore.
Thomas, William Hopkin, M.R.C.S. Eng., L.R.C.P. Edin., Maesteg.
Wilson, John, M.R.C.S. Eng., L.R.C.P. Lond., Harpenden.
Key, James, M.A., M.B., C.M. St. And., Worcester, Cape Colony.

ST. THOMAS'S HOSPITAL.—An altar and cross have been erected in the chapel of this hospital in memory of a regular worshipper therein. The altar is of oak and has been designed in the classic style of architecture, in harmony with that of the chapel; the cross also, which is of polished brass, is made to correspond with the surroundings of the place.

ROYAL INSTITUTION.—It may be well to direct attention to two or three subjects included in the recently issued prospectus of this institution. Where all are good it seems almost invidious to make a distinction. Nevertheless, it may be allowable to specify certain lectures as being of special interest to our readers. We give the list in the order of their delivery:—April 6th: Professor Victor Horsley, on the Destructive Effects of Projectiles. April 20th: Dr. J. Garson, on Early British Races. April 27th: Professor Marshall Ward, on the Action of Light on Bacteria and Fungi. May 4th: Dr. Sims Woodhead, on the Spread of Tuberculosis by Food. Two lectures (May 22nd and 29th) by Dr. Dallinger, on the Modern Microscope. Three lectures (May 5th, 12th, and 19th) by Captain Abney, on Colour Vision.

ROYAL EYE HOSPITAL, SOUTHWARK.—The annual meeting of the friends of this charity, better known as the Royal South London Ophthalmic Hospital, was held a few days ago, Professor McHardy being voted to the chair. By the report of the council it appeared that in the first year from the opening of the new premises by the Duke of York 13,221 patients had been treated, and of these 402 were relieved as in-patients. Regret was expressed that from lack of funds eighteen of the beds out of the forty which the new building had been designed to accommodate still remained empty. To fully utilise the benefits of the charity it was stated that not less than £2000 a year should be forthcoming, and to assist in raising that income the advantages offered by the hospital to patients who were able to pay for private rooms were pointed to. After the usual formal business had been concluded, an invitation was given to those governors who had not as yet critically inspected the new premises, and as the result of accepting the invitation great satisfaction was expressed at the carefully devised arrangements made for the benefit of the patients who sought the aid of the institution.

EPIDEMIC OF SCARLET FEVER AT BLACKHEATH.—An outbreak of scarlet fever occurred in Blackheath just before Easter, the great bulk of the cases commencing between the 20th and 27th of March. It was very soon discovered that the affected families were served by a single milk dealer, so that there is but little doubt that the infection must have been conveyed through the milk supply. The dealer himself does not appear to have been in any way to blame, though one of the men actually went about delivering the milk while (unknown to himself) the rash was out upon him. It is probable that this man was one of the first victims rather than the original cause of the outbreak, which must be looked for further back, and seems to be involved in some uncertainty. One of the principal schools in the district sent out post-cards on Easter Monday directing that the boys should not reassemble as had been arranged the next morning, but, after obtaining advice and information from the medical officer of health, the head master permitted the boys to return a few days later. An important girls' school has closed, and some of the smaller schools have since done so. Although a large number of the victims belong to the well-to-do classes, a good many have been sent to New Cross and other hospitals, and the arrangements for isolating the others have been so effectual that no case has been reported for more than a week in Kidbrook, the parish in which the greater part of the earlier cases occurred. Very exaggerated reports are current as to the extent of the epidemic, several hundred persons being said to be affected. As a matter of fact, however, we cannot learn that more than about eighty-nine cases have occurred in all the affected parishes taken together. So far there seems only to have been one death. Unconnected, in all probability, with this outbreak, another very sad death has occurred, that of a young medical man, from diphtheria, contracted from a child he had been attending.

ROYAL ALEXANDRA HOSPITAL, RHYL.—At a meeting of the subscribers, held at Chester on Saturday last, the Duke of Westminster presiding, it was resolved to rebuild the hospital on the present site, at an estimated cost of £15,000. towards which sum £8000 had already been received or promised. The Duke of Westminster subscribed £1000 to the fund.

CHRIST'S HOSPITAL.—At a meeting of the City Commission of Sewers on Tuesday, it was announced that the reconstruction of the drainage works at the school had been commenced in conformity with the plans of the engineers of the Commission, and that the alterations were in a fair way of being completed by the time the pupils shall have reassembled after Whitsuntide.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following are announced:—Dr. Bernhard Segnitz, one of the oldest practitioners in New York, and an author of various works dealing with scientific and medical subjects. He was a German by birth and education, but went to the United States during the political troubles of 1848.—Dr. J. G. Degner, Surgeon to St. Mark's Hospital, New York.—Dr. J. C. Armentrout, Professor of Physiology in the Keokuk College of Physicians and Surgeons.—Dr. J. Uffelmann, Honorary Professor of Hygiene and Bacteriology in the University of Rostock.—Dr. Pitti-Ferrandi, a Corsican Senator.—Dr. Ollivier, *professeur-agrégé* and Physician to the Children's Hospital, Paris.—M. Juhel-Rénoy, Physician to the Paris Hospitals, of typhoid fever contracted from a patient in his wards.—Dr. Egas Carlos Muniz Sodré de Aragao, Professor of General Pathology in the University of Bahia.—Dr. Alexander Theodor von Middendorff, the well-known Siberian explorer and anthropologist.—Dr. Carl Schmidt, Professor of Physiological Chemistry in the university of Jurieff (Dorpat). He had been a pupil of Liebig and also of Wöhler, and had published various researches, some of them in conjunction with Bidder, on the Chemistry of Digestion and on Nutrition.—Dr. Friedrich Wilhelm Hermann Delffs, the senior member of the Heidelberg Medical Faculty, where he had been Professor of Chemistry until forced by increasing years to give up lecturing.—Dr. Sarrazin, the senior member of the medical council of Westphalia. He studied law at Bonn before taking to medicine.—Dr. Arnould, Professor of Hygiene in the Lille Faculty of Medicine.—Dr. F. Birnbaum, Extraordinary Professor of Midwifery, Gynæcology, and Children's Diseases in Giessen.

FOREIGN UNIVERSITY INTELLIGENCE. — *Italian Universities:* Six of the smaller universities have been suppressed by the Government from motives of economy—viz., Messina, Catania, Siena, Sassari, Modena, and Parma. They all comprise medical and pharmaceutical faculties, and the last two possess also veterinary faculties.—*Berlin:* Dr. Willoughby Dayton Miller, an American by birth, who has been teaching dentistry in the Dental Institute since its establishment some ten years ago, has been appointed Extraordinary Professor of Dentistry in the Medical Faculty. His original researches have thrown considerable light on the bacteriology of dental caries.—*Tübingen:* Dr. Hofmeister has been recognised as *privat-docent* in Surgery.—*Vienna:* Dr. Johann Habart has been licensed by the Minister of Education as *privat-docent* in Military Surgery.—*Würzburg:* Dr. C. Arens has been recognised as *privat-docent* in Hygiene.—*Zurich:* Dr. Roth, hitherto *privat-docent* in the University and assistant in the Institute of Hygiene, has been appointed Professor of Hygiene and Bacteriology in the Polytechnic.—*Paris:* The Professors of the Faculty of Medicine have almost unanimously agreed to recommend M. Raymond for the Clinical Professorship of Diseases of the Nervous System.—*Bonn:* Dr. Heinrich Kayser, of the Hannover Technical School, who has worked under both Kundt and Helmholtz has been appointed Professor of Physics.—*Constantinople:* Dr. Djelal Mouktha has been appointed Professor of Dermatology.—*St. Louis:* Dr. J. Grindon has been appointed Professor of Physiology.—*St. Petersburg (Military Medico-Chirurgical Academy):* Dr. D. A. Sokoloff has been recognised as *privat-docent* in Children's Diseases.—*Halle:* Dr. Lesser has been promoted to an Extraordinary Professorship of Surgery.—*Helsingfors:* Dr. R. Kolster has been appointed *docent* in Pathological Anatomy.—*Kieff:* Dr. Voskresenski has been recognised as *privat-docent* in Midwifery and Gynæcology.—*Stockholm:* Dr. J. W. Berg has been promoted to the Ordinary Professorship of Surgery.—*Philadelphia (Policlinic):* Dr. Harrison Allen has been appointed Professor of Laryngology and Rhinology.

MEDICAL MAGISTRATES.—Dr. Henry T. Stiles of Spalding, and Mr. W. J. Pilcher, F.R.C.S.Eng., of Boston, have been placed on the Commission of the Peace for the Holland division of Lincolnshire.

SISTER DORA MEMORIAL CONVALESCENT HOSPITAL.—From the annual report of this institution, which is situated on Cannock Chase, at Milford, near Stafford, it appears that the hospital was open from April 10th until Nov. 13th, 1893, during which period 140 patients were received, the largest number admitted in any previous season. The statement of income and expenditure, including £175 12*s.* 7*d.* received from patients, shows a balance in hand of £35 10*s.* 11*d.*

ROBBERIES FROM MEDICAL MEN.—At the Central Criminal Court on Monday a man, who stated that he had been formerly in the army and in a good position in life, was sentenced to five years' penal servitude for, amongst other offences, stealing articles from medical practitioners' consulting-rooms.—A waiter at St. Bartholomew's Hospital, who pleaded guilty to having stolen a £5 note from the desk of one of the house surgeons, was sent to prison for four months with hard labour.

UNIVERSITY OF OXFORD.—Notice has been given of the dates at which the examinations for the respective degrees in medicine and surgery will be held during Trinity term, 1894. They are as follows: the final examination for M.B. will commence on Monday, June 4th; the examination for M.S. will commence on Wednesday, June 13th; the first examination for M.B. will commence on Friday, June 22nd. Names of candidates for examination will be received not later than at the undermentioned dates—viz., for the final examination for M.B., Saturday, May 19th; for the examination for M.S., Wednesday, May 30th; and for the first examination for M.B., Thursday, June 7th. Information regarding the nature and scope of these examinations may be found in our Students' Number, published on Sept. 2nd, 1893.

THE INSTITUTE OF CERTIFICATED SANITARY INSPECTORS.—Mr. A. Wynter Blyth, the medical officer of health of Marylebone, presided on Thursday, March 22nd, at the second annual meeting of the Institute of Certificated Sanitary Inspectors held at the Parkes Museum, Margaret-street, London, and read a paper on "The Education of the Sanitary Inspector, Past, Present, and Future." Mr. Blyth showed how the present sanitary inspector had grown out of the inspector of nuisances appointed under the Public Health Act of 1848. In 1877 the Sanitary Institute established a qualifying examination and five candidates presented themselves, but last year the number of aspirants was 510 and nearly half of this number succeeded in obtaining the certificate. The total number of persons who had obtained certificates up to the end of 1893 was 1380. He contended that if the supply of fully qualified officers was to be kept up they should be permitted to take pupils under certain restrictions. He approved of the appointment of lady sanitary officers, but considered the training should be equally as severe as for male appointments, and that they should pass a qualifying examination. Lady students were increasing in number and already the Institute had granted ten certificates to ladies. Mr. Blyth dwelt on the necessity of the student training his mind to observe, and to describe accurately that which he had observed, and commit it to writing and diagrammatic representation.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Opium Commission.

AN early day has been fixed for the meeting of the British members of this Commission, with the view of agreeing on the terms of their report. There appears to be practical unanimity amongst them, and the views of the Indian members of the Commission do not seem likely to raise a discordant note. The opinions of those members of the Commission who are not in complete agreement with the draft will be set forth in a separate report.

Imported Animals and Disease.

On Tuesday a deputation representing the Central and Associated Chambers of Agriculture waited on the President of the Board of Agriculture to urge on him the advisability of adopting further measures of precaution against the introduction of disease by means of imported

cattle. Mr. Channing, M.P., introduced the deputation and explained that its object was to recommend that foreign cattle should be compulsorily slaughtered at the port of landing, except under certain specified conditions. After several speakers had addressed the Minister, Mr. Herbert Gardner said, in reply, that the indiscriminate slaughter proposed was a measure which could not receive the support of the Government; moreover, the object sought was amply provided for by the present law.

Beer Adulteration.

A Bill dealing with this subject has again been introduced in the House of Commons. It subjects to a penalty not exceeding £5 on the first conviction, and £20 on the second, all persons who offer for sale beer, ale, or porter containing other ingredients than hops and barley malt without notifying the fact in a conspicuous manner on their premises. By way of encouragement to the public to come forward with the necessary information for a conviction it is provided that one-half of the fine in every case shall be paid to the informer.

Butter and Margarine.

In the course of next week Mr. Horace Plunkett will introduce a Bill to amend the Margarine Act of 1887 and the Sale of Food and Drugs Act of 1875. The main object of the Bill is to give further protection to the Irish butter trade against dealers who sell margarine as genuine Irish butter. This practice is said to be carried on to a very large extent in Liverpool and Manchester, and the law in its present state affords little protection to *bond-fide* traders.

HOUSE OF COMMONS.

THURSDAY, MARCH 29TH.

Quarantine and Yellow Fever.

Mr. T. G. Bowles wished to call attention to the system of quarantine as established by Act of Parliament, and the provisions of which Act did not include yellow fever. He characterised the measure as ridiculous, oppressive, and expensive. Instead of doing good, it was productive of great harm.—Mr. Shaw-Lefevre said that the Act of Geo. IV. did include yellow fever, but quarantine regulations had interfered somewhat with the carrying out of its provisions. The department were at the present time in correspondence with the Privy Council and the Foreign Office on the question, and they believed that they would soon be in a position to state the views of foreign Governments upon the matter. He did not, therefore, think there was any necessity for the appointment of a select committee on the subject, especially as it was receiving the careful attention of the Government.

FRIDAY, MARCH 30TH.

University of London Commission.

Sir A. Rollit gave notice that, in view of the answer given by the leader of the House on Thursday, to the effect that there was no intention on the part of the Government to propose legislation this session in pursuance of the report on the University of London, he would on April 20th call attention to the report and move a resolution on the subject.

The Charity Commission.

On the motion for going into Committee of Supply a resolution was moved by Mr. John Ellis the object of which was to recommend that a select committee be appointed to inquire whether it was desirable to take measures to bring the action of the Charity Commission more strictly under Parliamentary control, since new and onerous duties had been imposed on that Commission. The motion gave rise to a rather long discussion and was eventually agreed to.

MONDAY, APRIL 2ND.

Medical Division of the War Office.

Replying to a question put by Captain Norton as to the nature of the duties performed at the Medical Division of the War Office by the officer designated the "Professional Assistant" to the Director-General, Mr. Campbell Bannerman stated that the functionary in question acted as the deputy of the Director-General in his absence and generally assisted him in the discharge of the duties pertaining to the Army Medical Department.

The Undermanning of Ships.

Mr. Mundella, in answer to a question preferred by Mr. Provand, said he fully recognised the importance of British merchant vessels being properly and sufficiently manned, and he was taking advice as to the best means of securing so desirable a result. He added that the question of undermanning had already received the attention of the Board of Trade, and the intention was to pursue it further. Up to the present time the regulations of the Merchant Shipping Act did not allow of a ship being detained in port on account of deficient equipment.

TUESDAY, APRIL 3RD.

Police and Sanitary Regulations.

Mr. G. Russell moved that a committee be appointed to whom should be committed all private Bills promoted by municipal and other local authorities, by which it was proposed to create powers relating to police and sanitary regulations which differed from or were repugnant to the general law. After some discussion the motion was agreed to.

Anthrax.

Mr. Gardner, in reply to a question by Mr. Fellowes on this subject, said he could not at that moment conveniently state the objections entertained against the proposal to empower local authorities to award compensation to the owner of an animal which had to be slaughtered in order to prevent the spread of anthrax, but he would be happy to communicate personally to the hon. member the nature of those objections. With regard to the suggestion made by his interrogator that a departmental committee might be appointed in reference to the matter, he would consider whether such a step could be taken with advantage; but, first of all, he wished to be in possession of certain reports for which he had called, respecting the feasibility of inoculation as a preventive of the disease and the measures adopted in foreign countries to the same end.

WEDNESDAY, APRIL 4TH.

Old Age Provident Pensions Bill.

Colonel Palmer moved the second reading of this Bill, and said the measure had been framed mainly on the law now in force in Denmark.—Many members gave their views for or against the provisions of the Bill, and the discussion was adjourned after the Chancellor of the Exchequer had promised that an opportunity should be given on a future day for renewing the debate.

Prevention of Cruelty to Children Bill.

Sir R. Webster, in moving the second reading of this Bill, explained the object of the measure, which was to remove certain doubts which had arisen with regard to it, to extend the age in the case of boys from fourteen to sixteen, and to effect other alterations in the law bearing on the subject, as well as to enable the Secretary of State to sanction the emigration of children under certain specified conditions.—The Lord Advocate and other members of the Government expressed a general approval of the measure, and the Bill was read a second time.

At the conclusion of the sitting Sir C. Cameron obtained leave to introduce a Bill to amend the Sale of Food and Drugs Act, 1875, and the Margarine Act, 1887.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, JOSEPH, M.B., C.M. Edin., has been reappointed Medical Officer of Health for the Runcorn Rural Sanitary District.

BARROW, A. S., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Taunton and Somerset Hospital, Taunton, vice Morris, resigned.

BATEMURST, LALUM W., M.B. Lond., has been appointed Resident Clinical Assistant to the St. Marylebone Infirmary, vice O. Maurice, resigned.

BODY, H. M., M.R.C.S., has been reappointed Medical Officer for the Tedburn, St. Mary Sanitary District, of the St. Thomas Union.

CADDY, DUNCAN J., M.B., F.R.C.S., has been appointed Surgeon to H.M. Colonial Medical Service.

CAMPBELL, P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Pontypool Rural Sanitary District, vice Wood resigned.

CHADWICK, CHARLES M., M.A., M.D. Oxon., M.R.C.P. Lond., has been appointed Honorary Physician to the Leeds General Infirmary, vice E. H. Jacob, deceased.

CONRAN, PATRICK ALOYSIUS, L.R.C.P., L.R.C.S.E., L.F.P. & S., has been appointed Assistant Colonial Surgeon at the Gold Coast, Colonial Medical Service.

CROSSE, H., M.B., C.M., Edin., has been appointed Assistant Surgeon-Accoucheur to the Norwich Lying-in Charity.

CROCKER, J. T., M.B., Ch.B. Vict., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Eccles.

CROWTHER, THOS., M.D. Aberd., M.R.C.S., has been appointed Medical Officer of Health for the Luddenden Foot Urban Sanitary District of the Halifax Union, vice Wellburn.

CLAYTON, WM. K., M.D. Brux., L.R.C.P. L.M., L.R.C.S. Edin., has been appointed Medical Officer of Health for Wakefield.

FIELDEN, SAML., M.D. Durh., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Shildon, of the Auckland Union.

FINDLAY, GEO., M.B., C.M. Aberd., has been reappointed Assistant Medical Officer of Health for the Shipston-on-Stour Union.

FULLER, E. BARNARD, M.B., C.M. Edin., F.R.C.S.E., has been appointed Medical Officer of Health for the City of Cape Town, South Africa.

GALLETLY, W. G., M.B., C.M. Edin., has been appointed Medical Officer for the Northwold Sanitary District of the Thetford Union.

GRAVELY, WM. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the sixth Sanitary District of the Cuckfield Union.

HASTING, E. B., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Assistant Medical Officer for the Workhouse of the Whitechapel Union.

HARTIGAN, T. J. P., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the East Grinstead Sanitary District and for the Union Workhouse.

HITCHENS, T. H., M.R.C.S., has been reappointed Medical Officer of Health for the Shipston-on-Stour Union.

HOLT, H. M., M.R.C.S., has been reappointed Medical Officer of Health for the Malton Urban Sanitary District.

ISARD, OSWALD H., M.B., C.M. Edin., has been appointed Assistant House Surgeon to the District Hospital, West Bromwich, vice Rutherford, resigned.

JOHNSON, H. S., M.R.C.P. L.M. Irel., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Totnes Rural Sanitary District.

JONES, J. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Aberavon.

LEWIS, ERNEST WOOL, M.R.C.S. Eng., L.R.C.P. Lond. (late House Surgeon), has been appointed House Physician to the West London Hospital.

MACKEITH, A. A., M.B., C.M. Glasg., has been reappointed Medical Officer for the Brampford Speke Sanitary District of the St. Thomas Union.

NETTLE, WM., M.R.C.S., has been reappointed Medical Officer of Health for the Liskeard Rural and Urban Sanitary Districts of the Liskeard Union.

NICOLL, T. VERE, M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Stoke Newington Dispensary, N., vice the late William C. Toulmin.

PARKER, Jos. E., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer to the Ince Local Board, and also Medical Superintendent of the Board's Infectious Diseases Hospital.

PUDDICOMBE, E. L., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Reeve Sanitary District of the St. Thomas Union.

REYNOLDS, F. M., M.B., C.M. Edin., has been reappointed Medical Officer for the Newton Poppleford Sanitary District of the St. Thomas Union.

SOMERVILLE, J. W., M.B., M.S., D.P.H. Edin., has been appointed Medical Secretary to the Galashiels Cottage Hospital.

STIRK, PERCY H., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Bucks County General Infirmary, Aylesbury, vice C. B. Dale, resigned.

SUTTER, ROBERT ROSS, M.B., C.M. Aberd., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the West London Hospital.

SUTTON, HENRY G., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for Sittingbourne.

SYMONDS, C. P., M.R.C.S., has been appointed Medical Officer of Health for the Lathom Urban Sanitary District.

TAYLOR, ASHBY, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident House Surgeon to the Royal Infirmary, Glasgow, vice A. Watson.

TWINING, A. H., M.D. Durh., M.R.C.S., D.P.H. Camb., has been re-appointed Medical Officer of Health for the Kingsbridge Rural Sanitary District.

TWYFORD, WALTER, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Audlem Sanitary District, of the Nantwich Union.

VICKERS, C. W., L.R.C.P., L.M., Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Paignton Urban Sanitary District of the Totnes Union.

WALLER, T. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Infirmary, Chelmsford, vice Wheeler.

WESTLAKE, A., M.B., C.M. Edin., has been appointed Medical Officer for the New Grimsby Workhouse.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BURY DISPENSARY HOSPITAL, Bury, Lancs.—Senior House Surgeon. Salary £100 per annum, with board and residence.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon, for six months. Salary at the rate of £50 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Pathologist. Salary 100 guineas per annum. Applications to the Secretary, at the office, 24, Finsbury-circus, E.C.

DENTAL HOSPITAL OF LONDON, AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square.—Demonstrator. Honorarium, £50 per annum.

DERBY COUNTY ASYLUM, Mickleover, Derby.—Clinical Assistant for six months. Board (no beer), lodging and washing provided.

FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house, rent and taxes free, also coals, light, water, and cleaning, or in lieu thereof £20 per annum. Applications to the Secretary, board-room, Baggitt-street, Holywell.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Eastern Hospital for Fever Patients, The Grove, Homerton, E. Salary £15 per month, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Chief Offices, Norfolk House, Norfolk-street, Strand, W.C.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho-square.—Resident Medical Officer, for six months. Honorarium ten guineas.

NEWCASTLE-ON-TYNE DISPENSARY.—Resident Medical Officer for three years. Salary £250 per annum, with furnished residence.

OLDHAM INFIRMARY.—Senior House Surgeon. Salary £80 per annum, with board and residence.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments and board.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—Assistant House Physician for six months. Board and lodging provided, and a honorarium given of twenty guineas.

THE COPPICE, Nottingham.—Assistant Medical Officer at this Asylum for Private Patients, unmarried. Salary £120 per annum, with furnished apartments, board, washing, and attendance.

WEST RIDING ASYLUM, Menston, near Leeds.—Resident Clinical Assistant for six months. Board and residence provided.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board, &c.

WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—Resident House Surgeon (lady or gentleman). Salary £50 per annum, with board, lodging on the premises, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried, to visit and attend the sick poor at their own homes. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages and Deaths.

BIRTHS.

CASE.—On March 27th, at Westbourne-road, London, N., the wife of William Case, M.R.C.S.E., of a son (James Lee).

COATES.—On the 3rd inst., at Brechin-place, the wife of George Coates, M.D., of a son (Ronald).

COLLINS.—On March 22nd, at the Red House, Sawbridgeworth, Herts, the wife of Ethelbert Collins, L.R.C.P. Lond., M.R.C.S., of a daughter.

CONSTANT.—On March 30th, at Argyll Lodge, Scarborough, the wife of Thos. E. Constant, M.R.C.S. Eng., L.R.C.P. Lond., L.D.S., of a daughter.

ELKINGTON.—On March 28th, at Newport, Salop, the wife of E. A. Elkington, M.B. Lond., of a daughter.

LANGRAN.—On April 2nd, at the Lawn, Axminster, Devon, the wife of Wm. Langran, L.R.C.P. Ed., of a son.

MATHIAS.—On March 30th, at the Crescent, Plymouth, the wife of Surgeon-Captain H. B. Mathias, Army Medical Staff, of a daughter.

MOLSON.—On March 26th, at Coval Cottage, Chelmsford, the wife of J. Elsdale Molson, M.B., B.C. Camb., of a son.

PESKETT.—On March 25th, at Leyton, Essex, at the residence of her brother, the wife of A. W. Chalmers Peskett, M.A., M.B., B.C. Cantab., of a son.

MARRIAGES.

BARBER—SEILAN.—On March 29th, at All Saint's Church, South Wingfield, by the Rev. F. W. Christian, Vicar, and the Rev. H. W. Plumptre, Rector of Eastwood, Notts, Robert David Barber, M.R.C.S. Eng., L.S.A., Lond., youngest son of the late Samuel John Barber, architect, of Eastwood, to Alice Georgiana, widow of C. L. T. de Seilan, M.D., Aberd., and youngest daughter of the late Richard Clayton Strelley, of Oakerthorpe, Derbyshire.

BENNETT—GOODING.—On March 31st, at All Souls', Langham-place, Charles Henry Bennett, M.D., College House, Hammersmith, W., to Alice Brande, elder daughter of Mr. W. Gooding, J.P., Durleigh Elms, Bridgwater.

CRAWFORD—MCHARDY.—On the 4th inst, at the Cathedral Church of St. Mary, Edinburgh, by the Right Rev. the Bishop of Edinburgh, assisted by the Rev. I. K. Anderson, Rector of Mary Tavy, Tavistock, uncle of the bride, William Thomas Crawford, M.B, C.M., of Worksop, Notts, to Dora, elder daughter of Lieut.-Colonel McHardy, Royal Engineers, Prison Commissioner, Scotland.

DEANE—PRALL.—On April 3rd, at All Saint's, Carshalton, Edward Deane, M.R.C.S., of Caversham, Reading, to Emma Elly, eldest, daughter of the late Dr. Prall of West Malling.

HUNTER—FIELDEN.—On April 2nd, at Nutfield Church, Surrey, by the Right Rev. the Lord Bishop of Southwark, assisted by the Rev. G. Hartwell Jones, M.A., Rector of Nutfield, William Hunter Esq., M.D., M.R.C.P., of 54, Harley-street, Cavendish-square, W., to Beatrice, youngest daughter of the late Joshua Fielden, Esq., M.P., of Nutfield Priory, Surrey.

VOELCKER—ENGLISH.—On April 3rd, at Sutton-at-Hone Church, Kent, by the Rev. A. C. H. Bolton, Rector of Shimplingthorne, Bury St. Edmunds, uncle of the bride, assisted by the Rev. W. J. Weeks, Vicar of the Parish, Arthur Francis Voelcker, M.D., M.R.C.P., son of the late Dr. Aug. Voelcker, F.R.S., to Katharine Isabel, daughter of the late J. T. English, J.P., of Bradford Manor, N. Devon.

DEATHS.

BARSHAM.—On March 28th, at Weybourne, Boscombe, Bournemouth, Wilbam Orridge Barsham, M.R.C.S., L.R.C.P. Lond., late of Bagshot, Surrey, second son of John B. Barsham, of Fincham, Norfolk, aged 32.

BLACKER.—On March 18th, at Ventnor, Anna Isabella, daughter of Henry Gourlay, and wife of Arthur Barry Blacker, M.D., 16, West Eaton-place, S.W.

CROMPTON.—On March 31st, at his residence, 40, Harborne-road, Edgbaston, Dickinson Webster Crompton, F.R.C.S., F.L.S., in his 89th year.

GARVEY.—On March 29th, in Dublin, Thomas Blennerhassett Garvey, M.A., M.B., Assistant Registrar of the Court of Chancery in Ireland.

KIMBELL.—On April 2nd, at the Manor House, Knowle, Jonathan Henry Kimbell, J.P., F.R.C.S., aged 74.

MAYBURY.—On March 30th, at Holly Lodge, Richmond, Surrey, Augustus Kingston Maybury, M.D., aged 79 years.

MOORE.—On April 2nd, at 15, Blythswood-square, Glasgow, Samuel Johnston Moore, M.D.

PLAYFAIR.—On March 31st, in London after a brief illness, Catherine, the very dearly loved wife of David Thomson Playfair, M.D., of Bromley, Kent. Friends will please accept this intimation.

VERTUE.—On April 2nd, at Red House, Southwold, Suffolk, Francis Henry Vertue, M.R.C.S., J.P., aged 72 years.

WALSH.—On March 28th, at his residence, Worcester, Thomas W. Walsh, F.R.C.S., aged 77 years.

WOODCOCK.—On March 30th, at Westwood-park, Forest-hill, Arthur Henry Woodcock, L.R.C.P. Lond., M.R.C.S., aged 23.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, April 5th, 1894.

	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 30	29·93	S.E.	45	41	104	66	40	..	Hazy
,, 31	29·73	S.W.	55	50	108	67	45	..	Bright
April 1	30·02	S.W.	54	50	85	63	49	..	Cloudy
,, 2	29·93	S.E.	53	49	105	65	47	..	Cloudy
,, 3	29·83	S.E.	50	47	90	66	45	—	Hazy
,, 4	30·06	E.	45	44	87	60	43	..	Overcast
,, 5	30·17	N.E.	45	44	95	60	40	..	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.). St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Great Northern Central (2 30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2 30 P.M.), Great Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Chelsea (2 P.M.), Soho-sq. (2 P.M.), North West London (2 P.M.)

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Mr. Herbert E. Durham: On Persistence of the Thyreoglossal Duct, with Remarks on Median Cervical Fistulæ and Cysts due to Embryonic Remnants (communicated by Mr. Arthur E. Durham).—Dr. Ernst Michels: Case of Supra-peritoneal Vesical Hernia (communicated by Mr. R. W. Parker).

WEDNESDAY.—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Discussion on the question of Anæsthetics in Operations for Post-nasal Adenoid Growths.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.)—8 P.M. Mr. Lewis H. Isaacs: The Construction of Roads and Streets from a Sanitary Point of View. The paper will be followed by a Discussion.

HUNTERIAN SOCIETY.—8.30 P.M. Clinical Evening. Dr. William Ettles: Buphthalmia.—Dr. Arnold Chaplin: General Glandular Enlargement.—Dr. Arthur Davies: Leucodermia.—Dr. Fred. J. Smith: (1) Charcot's Joint Disease; (2) Cerebral Tumour.—Sir Hugh R. Beevor: Myxœdema.—Dr. Stowers: Unusual Syphilitic Eruption.—Mr. J. F. Woods: Cases illustrating Treatment by Suggestion. The President will also show cases.

THURSDAY.—NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY (New Board Room, Great Northern Central Hospital, Holloway-road, N.).—9 P.M. Dr. C. E. Beevor: On a case of Cerebral Tumour, with Remarks on certain Degeneration of Nerves and Consequent Symptoms (with lantern illustrations).—Mr. C. B. Lockwood: A case of Enterectomy and Intestinal Suture after Strangulated Hernia; Recovery.

FRIDAY.—BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (11, Chandos-street).—2 P.M. Dr. J. Macintyre: The Use of the Phonograph in Teaching and Practice. Mr. Geo. Stoker will open a Discussion upon the Expediency of Tracheotomy as a Preliminary to Thyrotomy for the Removal of Foreign Bodies from the Larynx. Cases will be shown by Dr. W. M. Whistler, Mr. F. Marsh, Mr. J. C. Wilkin, and Mr. Mayo Collier. Pathological Specimens will be shown by Dr. J. Macintyre and Mr. Wyatt Wingrave.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Finlay: A case of Abscess of the Spleen.—Dr. T. J. Maclagan: Cases of Myocarditis.—Mr. Arbuthnot Lane: Cases illustrating a more Effectual and Scientific Treatment of Fracture of the Tibia and Fibula than that in common use.—Mr. G. R. Turner: A case of Pelvic Enchondroma.—Mr. R. W. Parker: A case of Strangulated Femoral Hernia complicated by Volvulus, with especial reference to the Continuation of Obstruction after Herniotomy.

LECTURES AND ADDRESSES.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. J. A. Fleming: Electric Illumination.

WEDNESDAY.—WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Mr. MacAdam Eccles: Head Injuries. (Post-graduate Lecture.)

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. F. Seymour Haden: The Etching Revival.

FRIDAY.—ROYAL INSTITUTION.—9 P.M. Prof. J. J. Thomson: Some Properties of the Electric Discharge through Gases.

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Mr. John Alfred Gray: Life among the Afghans.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET should be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

ENGLISH MEDICAL EDUCATION IN PARIS.

IN reply to more than one correspondent seeking information on the above subject, we may say that since the promulgation of the new law on Dec. 1st, 1893, persons desiring to practise on French territory must hold the M.D. degree of a French faculty. Graduation involves passing five examinations and sustaining a thesis. Not more than the first three examinations may be passed in certain cases, but this favour will, perhaps, be more grudgingly accorded than in past times. The total fees amount to about £60.

Mr. T. A. Buck.—We are clearly of opinion that in the event of a member of a hospital staff being unable to respond to a call for his services, his place should be taken by one of his colleagues on the staff, and not by any one unconnected with the hospital. No doubt a combined protest would have the effect of preventing any further cause for complaint.

Cards should consult a solicitor. We do not think he has any remedy.

"ESSENCE OF COFFEE IN NARCOTIC POISONING."

To the Editors of THE LANCET.

SIRS,—In reference to Dr. Campbell's suggestion, contained in THE LANCET of March 24th, that essence of coffee may be used in place of the ordinary article in cases of opium poisoning, I would like to quote the words of Mr. Thurber, of the well-known firm of Thurber, Whyland, and Co., of New York. He says: "What is generally known as essence of coffee, in common parlance, is a coffee-colouring substance made from burnt sugar or molasses. The name *essence of coffee* is a misnomer." I fear that Dr. Campbell's suggestion is a very dangerous one, for there is no reason to suppose that any of the so-called "essences" or "extracts" have any of the anti-narcotic properties of the genuine article. If coffee be added to the extract at all, there is only just enough of it to give a coffee-like smell to the mixture.

I am, Sirs, yours faithfully,

Brixton-road, S.W., March 28th, 1894. DUNCAN SMITH, M.D.

*** Although our correspondent's letter contains statements of such sweeping condemnation regarding the genuineness of coffee essences we think it right that it should have publicity. According to the works of reference we have consulted there is really very little information about the composition of coffee essences. However, we are loth to believe that the manufacturers of coffee extracts &c. invariably supply a sophisticated article, and we shall be glad, therefore, to receive from such manufacturers samples, which we will submit to analysis in THE LANCET Laboratory, with the view, subsequently, of placing the results before our readers.—ED. L.

INSURANCE FEES IN LIÉGE.

A CORRESPONDENT writes:—"The Liége Medical Federation has recently decided to reject a tariff of fees proposed by an accident insurance company for certificates. These were to be paid for at the following rates: 1·25 fr. at the medical practitioner's house, or 2·50 fr. if the practitioner had to visit the patient, only 1·25 fr. being allowed for the final certificate of recovery. The Federation agreed to inform the company that for certificates of this kind nothing under three francs could be accepted. It is to be feared that in few English towns would there be found sufficient unanimity amongst the members of the profession to get an arrangement of this kind carried out."

Mr. W. B. Best might write to the Secretary of the Medical Faculty of the University of Toronto, which is, however, not the only school of medicine or degree-giving body in the city. The obligatory course is four years. The fees are: Matriculation, 85; lectures, first year, 873; second year, 876; third and fourth years, each 886; hospital fee, 88; graduation, 820. The examinations are generally considered to be somewhat less strict in most of the Canadian medical schools than those necessary for admission to the Register in this country. As to the openings for practice existing in Canada, we understand that those where a fair living is to be made by professional work alone are few and far between, and that competition is tolerably keen.

Sad.—The Purchaser—i.e., A.

"WHAT IS THE HYPODERMIC DOSE OF STRYCHNIA?"

To the Editors of THE LANCET.

SIRS,—My attention has been kindly called by Dr. Boyd to a letter written by him in THE LANCET of the 24th ult., inquiring as to the best hypodermic dose of strychnine. In a contribution to the St. Bartholomew's Hospital Reports for 1886, vol. xxii., I stated at some length my experience of the use of this drug *sub cutem* as a stimulant to the cardiac and respiratory nervous mechanisms. Dr. Boyd will allow me to remind him of the vast difference between the effects of a drug suddenly thrown into the systemic circulation and exerting its full power in the course of a few minutes and the effects of the same drug introduced by the slow process of absorption through the walls of the alimentary canal. In these cases of cardiac failure or cardiac dilatation (whether primary or secondary to some renal or lung affection), in which strychnine is so valuable when administered rapidly, absorption from the stomach or intestine is probably even slower than usual from the mechanical impediments to the circulation which are usually coexistent. Moreover, as Dr. Lauder Brunton has described in his Lettsomian Lectures, the liver has the power of selecting poisonous alkaloids from the portal blood and returning them into the duodenum by means of the biliary secretion; hence the relatively innocuous effect of snake poison administered by the mouth as compared with the fatal toxic effects produced by its direct introduction into the circulation. Two or three minims of liquor strychninæ injected hypodermically in the adult (equal to from $\frac{1}{10}$ gr. to $\frac{1}{20}$ gr.) form a considerable dose; and my experience is that it is better to employ this dose at frequent intervals, according to the urgency of the case and the effect of the first injection, than to use a larger initial dose. In cases where the drug is effective a more vigorous pulse can be detected in the course of a few minutes. It is impossible to make any stated rule as to the frequency of the administration of strychnine; but if the first dose produces no effect and the condition is alarming I should not hesitate to use a second dose in a quarter to half an hour. As a rule, I consider the injection of one-fiftieth of a grain every two or three hours to be a sufficiently large dose in most cases. I have never had the opportunity of testing the use of strychnine as an antidote to chloral or other poisons, but it is reasonable to suppose that under these conditions a much larger dose might be borne, as, indeed, Dr. Plummer relates in THE LANCET of March 31st.

I am, Sirs, yours faithfully,

Brook-street, W., April 2nd, 1894. S. H. HABERSHON.

THE SODEN FUND.

To the Editors of THE LANCET.

SIRS,—Since you were last good enough to acknowledge subscriptions to the above fund I have received the following:—

H. Sylvester	..	..	£1 1 0	O. Coleman	..	..	£0 10 0
A. Marshall	..	..	1 1 0	H. P. Miller	..	..	0 5 0
R. Brown	..	..		Sympathiser (1)	..	..	0 5 0
A. Roberts	..	..	1 0 0	B. W. Doyne	..	..	0 6 0
W. E. Cree	..	..	0 10 6	E. Howard	..	..	0 5 0
W. V. Lusk	..	..	0 10 6	Sympathiser (2)	..	..	0 4 6

I am, Sirs, yours faithfully,

Northampton-terrace, Swansea, April 2nd, 1894. W. F. BROOK.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Could any of your numerous readers kindly give me information regarding "Catley Abbey" water, more especially in reference to its use in the treatment of chronic rheumatism?

I am, Sirs, yours faithfully,

April 3rd, 1894. KASAK.

"THE LONDON COUNTY COUNCIL AND THE LONDON WATER SUPPLIES."

Dr. T. Eustace Hill.—Our correspondent is right, and the printer's errors he alludes to were rectified in our last issue. But if he will consult the annual report of the Medical Officer of Health of the Local Government Board for 1889 he will find that Dr. (now Sir) George Buchanan was referring to Dr. Cory's report when he said that "the lesson is *taught afresh* that we must go beyond the laboratory for evidence of any drinking-water being free from dangerous or organic pollution." (The italics are ours.)

E. D. (Brigg.)—It would be undesirable to circulate the letter. The explanation should be given by word of mouth, and that with care.

TREATMENT OF NUCHAL FURUNCULES.

To the Editors of THE LANCET.

SIRS,—I should be very thankful for any information from your numerous readers on the further treatment of "boils on the back of the neck." The patient is a gentleman of rather full habit of body, and of temperate habits. Although leading an active life he has been annoyed by repeated crops of boils (sometimes as many as sixty appearing in three days) on the back of the neck during the past eight months. For the past two months their irritable condition has become less, but they have never disappeared. They are now reappearing in hard small lumps with whitish heads, which last for two or three days. The patient had change of air to the sea-side, salt and Turkish baths, and plenty of all kinds of out-door exercise, with generous diet. Amongst other specific remedies he has taken a one-grain pill of sulphide of calcium four times a day for a month, together with liquor arsenicalis. His general health is now very good.

I am, Sirs, yours faithfully,

April 2nd, 1894. M. B.

"TRADE."

THE following advertisement is from the *Sun* and, fitly enough, appears under the above heading:—

"Ear, Throat, and Nose Hospital, 200, Commercial-road, E.—Hon. surgeon, Dr. Alexander, M.A., L.R.C.S., &c. Patients admitted on Tuesday and Thursday before 10 o'clock A.M., and on Monday, Wednesday, and Saturday after 6 o'clock P.M. Paying patients received without a recommendation."

G. C.—There is a very good book giving information on the subject of our correspondent's query published by Messrs. C. F. Dowsett and Co., entitled "Land."

Lucifer has not enclosed his name and address.

MEDICAL DIRECTORY OF THE UNITED STATES.

To the Editors of THE LANCET.

SIRS,—In reply to "Amicus" in THE LANCET of the 31st ult., I would state that there is no official directory or register of the medical profession issued in the United States; but there is an elaborate non-official Register and Directory published at Philadelphia, which may be obtained in London (Baillière and Co.). I could not tell when the last edition was issued. This gives, in addition to the names of the medical men practising in each State and territory, a good deal of information about the different States themselves—their history, geography, &c., also the hospitals, asylums, and medical schools in each State. Some of the States have a local medical directory or register. I would be glad to give further information.

I am, Sirs, yours faithfully,

WILLIAM WILLIAMS, D.D.S. Mich., M.D. Cleveland.

Oswestry, April 2nd, 1894.

COMMUNICATIONS not noticed in our present issue shall receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Cumberland Advertiser, Leicester Chronicle, Scarborough Evening Mail, World, Pioneer Mail, Scotsman, Carlisle Journal, Times of India, Royal Cornwall Gazette, Cambridge Chronicle, Western Morning News, Irish News, Derbyshire Courier, Manchester Guardian, Clitheroe Times, Hampshire Telegraph, Lancaster Standard, Eccles Advertiser, Ilfracombe Chronicle, Liverpool Daily Post, Yorkshire Post, City Press, Madras Times, Bombay Gazette, Cheltenham Chronicle, Scottish Leader, Le Temps (Paris), Dudley Herald, Woolwich Gazette, Bury Guardian, Darlington Echo, Bristol Mercury, Citizen, Architect, Builder, Sanitary Record, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, West Middlesex Standard, Hertfordshire Mercury, Daily Telegraph, Reading Mercury, Cork Constitution, Surrey Advertiser, Guy's Hospital Gazette, Australian Medical Journal, West Middlesex Advertiser, Sala's Journal, Science Siftings, Local Government Journal, Newry Telegraph, Cheltenham Examiner, Weekly Herald and North Middlesex Advertiser, Alnwick County Gazette, Guernsey News, Gatignani's Messenger, Le Courrier de la Presse (Paris), Lynn News, Oundle Guardian, Cannock Chase Courier, Beverley Independent, Journal of Gas Lighting, Retford Herald, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. Henry Anderson, Manchester; Mr. H. Astley, Portobello; Messrs. Armour and Co., London; Ancoats Hospital, Manchester, Hon. Secretary of; A., London; A. B., Brighton; A. S., Bournemouth.

B.—Dr. R. Braithwaite, London; Dr. T. A. Buck, Ryde; Dr. F. Beach, London; Mr. W. B Best, Basingstoke; Mr. Alfred Brindley, London; Mr. W. Bandon, Glasgow; Messrs. Barr and Son, London; Messrs. Burgoyne, Burbidges & Co., London; Messrs. Blondeau et Cie., London; *Birmingham Daily Post*, Proprietors of: Bury Dispensary Hospital, Hon. Secretary of; Bovril Limited, London, Secretary of; B., Swansea.

C.—Dr. William Craig, Cowdenheath; Mr. John Cochrane, Lochgoilhead; Messrs. Clarke, Son and Platt, London; Messrs. Carnrick & Co., London; Messrs. Cameron and Allan, Elgin; College of Preceptors, London, Secretary of; The Coppice, Notts, Medical Superintendent of.

D.—Dr. Sidney Davies, London; Dr. F. Daly, London; Mr. George Dickinson, Leamington; Mr. H. R. Duncan, Madeley; Messrs. W. Durant and Co., London; Messrs. W. Dawson and Sons, Limited, London; Derby County Asylum, Medical Superintendent of; *Daily Guardian*, Nottingham, Publisher of.

E.—Mr. L. Evans, London.

F.—Mr. H. Freeman, London; Flintshire Dispensary, Secretary of; F., London.

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N.—Dr. Nicoll, Glasgow; Mr. Edward Nettleship, London; Northumberland County, Deputy Clerk of, Newcastle-on-Tyne; Newcastle-on-Tyne Dispensary, Hon. Secretary of; Northern Medical and Commercial Agency, Newcastle-on-Tyne, Secretary of.

O.—Dr. J. W. Ogle, London; Mr. E. M. Owens, Brisbane; Messrs. Oppenheimer, Son and Co., London.

P.—Dr. G. V. Poore, London; Dr. Leslie Phillips, Birmingham; Dr. E. T. Pritchard, Ledbury; Messrs. Parke, Davis and Co., Detroit, U.S.A.; Plymouth Medical Society, Secretary of.

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S.—Dr. G. E. Shuttleworth, Richmond; Dr. E. H. Starling, London; Dr. Alfred Swann, Batley; Prof. Schäfer, Rickmansworth; Mr. W. J. Spence, Leicester; Mr. H. B. Sleeman, London; Mr. J. Collie Salter, Stoke-on-Trent; Mr. G. L. Stocker, London; Mr. F. T. Stedman, Great Bookham; Mr. C. Stain, Edinburgh; Messrs. G. Street and Co., London; Messrs. Smith, Elder and Co., London; Messrs. Stubbs, Manchester; State Mediterranean Railway, Italy, Principal Inspector of; Sanitary Wood Wool Co., Limited, London; Sanitas Co., Ltd., London, Secretary of.

T.—Dr. Arthur Thomson, Stratford-on-Avon; Dr. D. F. D. Turner, Edinburgh; Mr. K. J. Taunus, North Adams, Mass., U.S.A.; Tired of it.

V.—Mr. J. W. Vickers, London.

W.—Dr. R. T. Williamson, Manchester; Dr. G. J. A. Watson, Chippenham; Dr. F. J. Waldo, London; Dr. Leonard Wilde, London; Dr. H. W. Webber, Rickmansworth; Mr. V. M. Wadekar, Dhar, India; Messrs. E. Walker & Co., Heckmondwike; West Riding Asylum, Menston, Clerk and Steward of; West Riding Asylum, Wadsley, Medical Superintendent of.

Y.—Dr. Yarrow, London; Yorkshire College, Leeds, Registrar of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. A. E. Ash, Stoke-on-Trent; Dr. J. Aitken, London; Apollinaris Co., Limited, London, Assistant Secretary of; A. D. L., Leeds; Alpha, London; Aorta, London; A. K., London; A. B., Brighton; A. B., London.

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C.—Mr. J. Cochrane, Lochgoilhead; Mr. W. H. Cleveland, Selby; Mr. A. McLean Cato, London; Messrs. A. M. Clay and Co., Grimsby; C. L., Bexhill-on-Sea; Chemist Shop, London.

D.—Dr. D. S. Davies, Clifton; Mr H. A. D. Dickson, London; Dudley Dispensary, Hon. Secretary of.

E.—Dr. G. M. Edwards, London; Dr. C. S. Evans, Shaftesbury.

F.—Mr. A. Farr, London; Forceps, London.

G.—Dr. G. W. Grote, London; Dr. H. C. Garth, Morden; Dr. C. Godson, London; Mr. W. H. Garde, Edinburgh; Mr. P. B. Grenfell, Penzance; Messrs. Garnan Bros., London.

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N.—Dr. E. C. Neumann, Zürich; N., London; Nucleus, London; Nonconformist, London.

O.—Mr. J. F. O'Connor, Mallow, co. Cork; Mr. J. O'Connell, Banbury; Omega, London.

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R.—Rex, London; Roger, Bath; Ruabon, London.

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T.—Dr. G. M. E. Thorp, Stourport; Mr. Thomarson, London; Mr. J. Thin, Edinburgh; Miss L. Trewby, London; Miss Thomas, London; Messrs. Truelove and Hanson, London; Tiverton Infirmary, Secretary of; Tutor, London.

V.—V. L., Liverpool.

W.—Dr. A Watt, London; Dr. D. White, Bangor, Ireland; Mr. W. Williams, Oswestry; Mr. J. L. Williams, London; Messrs. Williams and Jones, Mountain Ash; W. E. N., Liverpool.

Y.—Yorks, London.

Z.—Z., London.

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